

KNX application description Control Pro series:

1 Detector function

The sensors of the Control Pro series consist of presence detectors (passive infrared, high-frequency and ultrasonic technology) with integrated light sensor for brightness measurement. All detectors are equipped with an infrared communication interface for starting the programming mode via IR remote control or the Steinel SmartRemote to start the programming mode, as well as a blue LED for feedback display.

The following detectors are available:

IR Quattro: PIR presence detector with a pyro (1,760 switching zones) for motion detection and integrated Light sensor. The sensor has a square detection characteristic and at 2.8m, it covers a wide range of applications. Mounting height 4x4m presence and 7x7m movement. The detection range can be reduced exactly to the desired area to be monitored via a mechanical range adjustment on the rear of the sensor module. In addition, the sensitivity of the presence detector can be reduced via ETS.

IR Quattro HD: High-resolution PIR presence detector with four pyros (4800 switching zones) for motion detection and integrated light sensor. The sensor has a square detection characteristic and covers 8x8m presence and 20x20m motion at a mounting height of 2.8m. The detection range can be reduced exactly to the desired area to be monitored via a mechanical range adjustment on the rear of the sensor module. In addition, the sensitivity of the presence detector can be reduced via ETS.

HF 360: The HF presence detector consists of a high-frequency (HF) sensor and an integrated light sensor. The detector detects a diameter of 12m at a mounting height of 2.8m. The range can be changed via an amplification factor and a sensitivity setting via ETS.

DUAL HF: The HF presence detector consists of two HF sensors and an integrated light sensor. The DUAL HF is a presence detector specially designed for corridors and, with its two high-frequency sensors, covers corridors of up to 20 metres with one presence detector. Particularly important here is the advantage of improved radial motion detection towards the detector compared to conventional PIR detectors. The range can be changed via an amplification factor and a sensitivity setting via ETS.

The HF presence detectors for ceiling mounting differ from a PIR detector in that they can be installed in the ceiling:

- Improved detection of radial movements (towards the detector),
- Detection through glass, wood or thin walls,
- Insensitivity to heat sources in the detection area.
- Possibility of invisible mounting in a suspended ceiling via accessory adapter (light measurement no longer possible)

DualTech: The DualTech presence detector consists of four ultrasonic (US) sensors, a pyro (PIR sensor) and an integrated light sensor. At a mounting height of 2.8m, the detector detects a diameter of 6m presence and 10m movement. The special feature of the DualTech sensor is that the technology or combination of technologies can be selected for switching on (first presence) or stopping (maintaining presence). Thus, very robust (both technologies must always detect motion) or very sensitive (no matter which technology detects motion) scenarios can be selected. The range can be changed via an amplification factor (US) and a sensitivity setting (PIR) via ETS.

US 360: The US presence detector consists of four ultrasonic sensors and an integrated light sensor. At a mounting height of 2.8m, the detector detects a diameter of 6m presence and 10m movement. The range can be changed via a gain factor via ETS.

Single US: The US presence detector consists of two ultrasonic sensors and an integrated light sensor. The detector covers an area of 10x3m at a mounting height of 2.8m. Since the ultrasonic signal is reflected by walls, the detector is also ideal for small rooms or stairwells.

Dual US: The US presence detector consists of four ultrasonic sensors and an integrated light sensor. The DUAL US is a presence detector specially designed for corridors and, with its four ultrasonic sensors, covers corridors of up to 20 metres with one presence detector. Particularly important here is the advantage of improved radial motion detection towards the detector, compared to conventional PIR detectors (Passive-Infrared).

The US presence detectors for ceiling mounting differ from a PIR detector in that they can be installed in the ceiling:

- Improved detection of radial movements (towards the detector),
- Detection around materials, no direct view required,
- Insensitivity to heat sources in the detection area.

The following settings must be set under General Settings:

- Select Sensor to define the detector used.

The detectors can perform the following functions, which are activated or deactivated in the general settings. can be deactivated:

1.1 Functions

- Output light outputs 1-4 - Switching of the lighting for up to 4 light outputs
- Output constant light control 1-2 - Constant light control for up to 2 light outputs in addition to the 2 switched light outputs
- Basic lighting output - switching to basic lighting, in the absence of persons
- Presence output - switching independent of brightness in case of presence
- Output absence - switching independent of brightness during absence
- HVAC output - presence-dependent circuit
- Output twilight switch - brightness-dependent switching without consideration of presence
- Brightness output - output of the measured brightness value
- Output Sabotage - Cyclic transmission of a telegram (Heartbeat)
- Logic gate output - circuit or scene call based on the state of one or more input objects

Which of these functions is to be used (activated) is set via the "General Settings" parameter window with the Engineering Tool Software (ETS) from version ETS 4.0.

1.2 Light output

The sensor has four independent light outputs. Each light output can be parameterized with its own switching threshold. Several datapoint types are available for the initial object. Depending on the data point type of the outbound object, you can use inbound objects to override it. The light output mode can be fully or semi-automatic. The follow-up time can be fixed or the IQ mode can be configured. One additional basic lighting can be set for each light output. A slave input object is available for each output to extend the range.

It can be set whether the light output uses the motion detector logic or the presence detector logic. With motion detector logic, the sensor does not switch off depending on the incident daylight. At the presence detector logic, the lighting is switched off if there is sufficient daylight. The Presence detector logic is parameterised with an offset. If the measured brightness rises above the value "Switching threshold + offset Switching threshold OFF", the follow-up time is not re-triggered when presence is detected. The output switches off at the end of the follow-up time.

In example one, presence is detected at time t1 and the light output switches on. From now on, continuous presence is recorded. The brightness jump is determined at time t2. From t3 the brightness increases further. The measured brightness from t4 exceeds the value "Switching threshold + offset Switching threshold OFF". Only from the time t5 is the follow-up time no longer re-triggered. Here the measured brightness is greater than "Switching threshold + offset Switching threshold OFF + offset". At time t6 the follow-up time has elapsed and the light output is switched off.

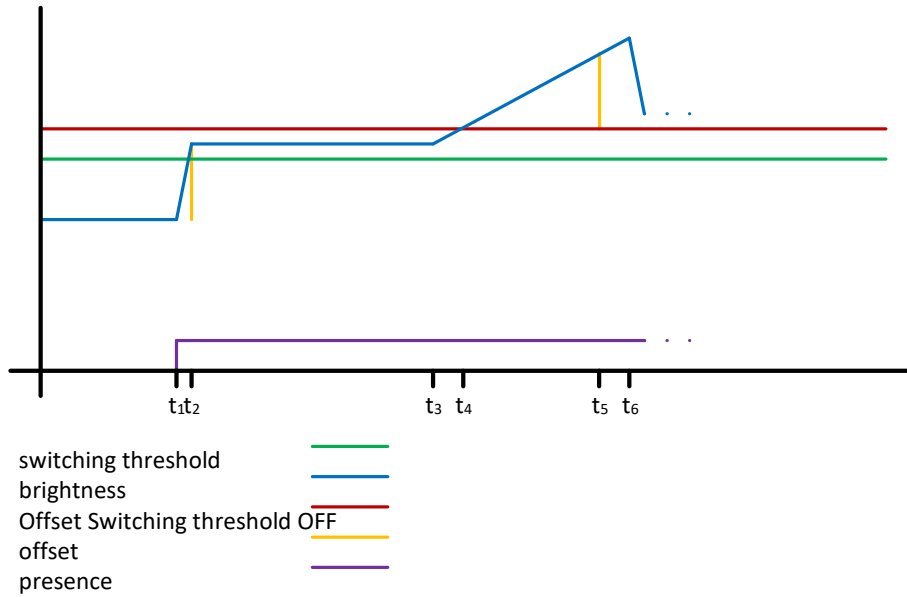


Figure 1 Example 1 Switch off brightness based

In example two, light output 1 switches on first (t_1). The brightness jump is determined at t_2 . Then the measured brightness falls below the switching threshold of light output 2 and switches light output 2 on (t_3). The brightness step is determined in t_4 and added to an offset with the brightness step of light output 1. From time t_5 the measured brightness exceeds the value "Switching threshold light output 2 + offset Switching threshold light output 2 OFF + offset" and the follow-up time to light output 2 is no longer re-triggered. The light output 2 switches off the output (t_6) after the follow-up time has elapsed. The brightness jump is determined at t_7 and added to the offset. From time t_8 the measured brightness exceeds the value "Switching threshold light output 1 + offset Switching threshold light output 1 OFF + offset" and the follow-up time to light output 1 is no longer re-triggered. The light output 1 switches off the output (t_8) after the follow-up time has elapsed.

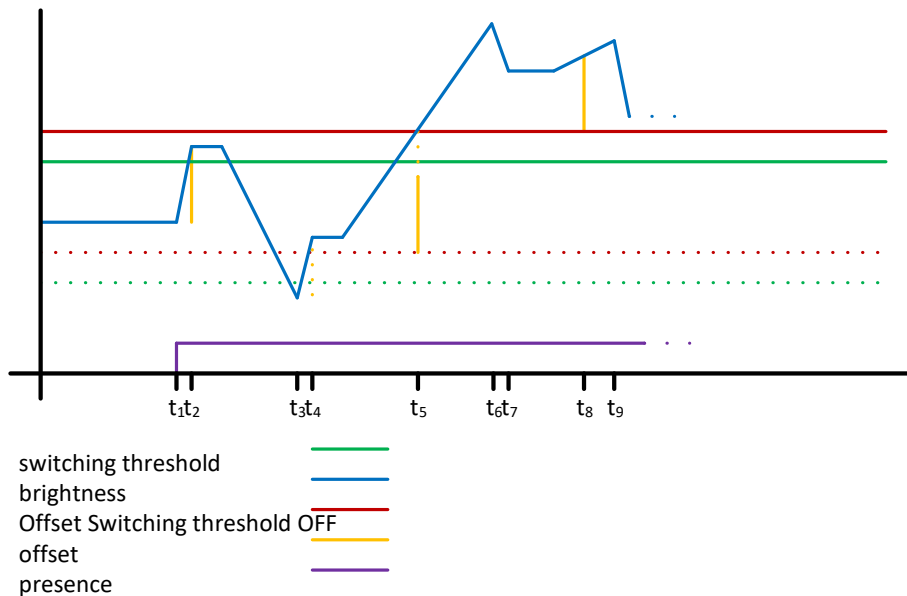


Figure 2 Example 2 Brightness-based switching off

1.3 Constant light controller output:

The constant light control always approaches from above the setpoint to adjust the dimming value of the lighting. If constant light control is active and below the setpoint, the setpoint must first be exceeded. The maximum deviation from the setpoint is only above the setpoint. Thus the permissible range in which the control is balanced

is always only between the setpoint and the setpoint plus maximum deviation. This is illustrated in the illustration "Constant light control range off".

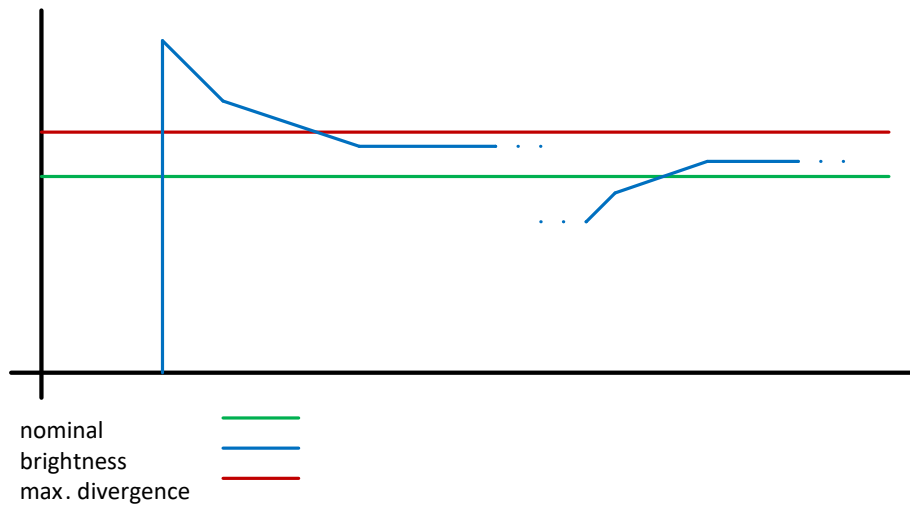


Figure 3 Constant light control range compensated

The start value of the constant lighting control can be parameterised either fixed or dynamically. With the dynamic start value, the sensor tries to switch on the lighting as close as possible to the brightness setpoint.

Note: To use the dynamic start value, the teach process must be carried out. The fixed value is used until the adjustment.

Some parameters can be configured twice for a day/night changeover.

1.3.1 Adjustment

The accuracy of the constant light control is to be improved by recording the current dimming value during the teach event. During the teach event, make sure that the maximum daylight component does not exceed 20 lux. After the brightness setpoint has been taught, the lighting dims to 100% and goes down to 0% in 10% steps.

A correction factor and a calculated correction intensity are used to better compensate for daylight:

$$\text{Korrekturintensität} = \frac{\text{Dimmwert aktuell} - \text{Dimmwert bei Teach}}{\text{Korrekturfaktor}}$$

$$\text{Neuer Helligkeitswert} = \text{Aktuelle Helligkeit} * (1 + \text{Korrekturintensität})$$

Note: If the brightness setpoint is changed after the adjustment, the new brightness setpoint must be adjusted again.

1.3.2 Adjustment procedure

- 1) Deactivate (block) constant light control and wait for the lighting to warm up (constant measured brightness value at luxmeter)
- 2) Manually dim the lighting until the desired brightness setpoint is reached.

- 3) Send a "1" to the teach communication object.
- 4) The sensor starts the adjustment. Duration approx. 110 seconds

1.3.3 Control speed

The control speed can be set via the parameters "Send new dimming value after" and "Max. step size during dimming". The maximum step size is set at

$$\text{Aktuelle Helligkeit} \geq \text{HelligkeitsSollwert} + \text{Max. Abweichung} * 2$$

or

$$\text{Aktuelle Helligkeit} \leq \text{HelligkeitsSollwert} - \text{Max. Abweichung}$$

is used. If the current brightness is closer to the brightness setpoint, the step size is halved. At the borders 100% and 0% the step size is set to a minimum.

1.3.4 2nd output

A second output can be activated for constant light control. The second output is controlled depending on an adjustable offset to the first output. When switching on, the second output is sent directly with the value "Dimming value output 1 + offset". The value is limited to 100%. Is the first Light output dimmed to 100%, a negative offset is set and the current setpoint is not reached, the second output dims stepwise up to .max. 100%. If the light output is at 0.5% or the minimum level, a positive offset is set and the setpoint is exceeded, the second output dims down to min. the value of the first output.

1.4 Basic lighting output

Basic lighting is available for the light outputs and constant light control. The following settings are possible:

- **Time limited:** At the end of the run-on time, the output switches off the lighting and checks the Brightness. As soon as the setpoint or the switching threshold falls below the adjusted brightness, the basic illumination is switched on for the parameterised time. If the measured brightness is above this value, the lighting is off.
- **Depending on brightness:** If no presence is detected by the sensor and the measured brightness is below the setpoint or switching threshold, the basic illumination is switched on.
- **Dimming (only for light output):** At the end of the follow-up time, the sensor gradually dims the lighting until it switches off.
- **Always:** The basic illumination is always active if the output is not switched on.

If the basic illumination is active and the sensor detects presence, the output switches on again.

Note: If the light output has not been parameterised in day mode and the basic lighting has been set to "always", the set switching threshold is invalid. The output then always switches between the switched-on state and the basic lighting. The output switches on for each presence detection during basic lighting.

1.5 Output Presence

The presence output operates independently of brightness. A switch-on delay and a follow-up time can be parameterised. It is possible to send the current status cyclically depending on the status.

Note: The presence output can be used with a master slave network. The slave presence output must be linked with the input object of the master. Note the following Settings of the slave input at the master and the transmission behaviour of the slave presence output.

1.6 Output Absence

Like the presence output, the absence output operates independently of brightness. A switch-on delay and a follow-up time can be parameterised. In this case, the follow-up time expires as soon as someone has entered the detection area. It is possible to send the current status cyclically depending on the status.

1.7 HVAC output

The HVAC output operates independently of brightness and is only dependent on a detected movement. A switch-on delay and a follow-up time can be parameterised.

1.8 Output twilight switch

The twilight switch output works only as a function of the measured brightness value and independent of the presence of persons. If the measured value is below the set threshold, the output is switched.

1.9 Brightness output

The brightness measurement output transmits the measured brightness value of the sensor to the bus either after a minimum change of the value or cyclically after a defined interval.

1.10 Output Sabotage

The output Sabotage serves as heartbeat to detect the defect of the detector or manipulation e.g. by removing the sensor head due to the missing interval telegram.

1.11 logic gate

Up to two logic gates with up to four inputs can be configured. Possible links are AND, OR and EXCLUSIVE OR. The output signal can be given by a switching command or value. The switching command or value can be parameterized depending on the logical state. The output can send the current status to the KNX bus on change, on change to logic 1 or on change to logic 0.

2 interconnectedness

A slave input is available at all outputs that use the presence status. Exception is the own presence output. The entrance can be in two different types of establishments.

1. An ON and OFF signal is expected. When switched on, the master triggers the Follow-up time until the own presence status is off and the slave input is not connected to the Value OFF has
2. Only ONE signal is expected. With every ON signal, the master trigger s the follow-up time in the switched-on state.

Master/Slave networking:

- light output
- constant light control
- HVAC

3 Fully & semi-automatic

A parameter can be used to set whether the presence detector is to operate in fully automatic or semi-automatic mode. The mode of operation for the light outputs and constant light control can be set via the parameter "Light output mode" or "Constant light control mode". In fully automatic operation, the lighting is switched on automatically when persons are present and, depending on the setting, either depending on the brightness or not, and switched off automatically when persons are absent or sufficient brightness.

When operating as a "semi-automatic machine", the lighting must be switched on manually. However, it is automatically either switched off depending on the brightness (depending on the setting) or switched off when no person is left in the detection area of the detector.

4 Day/night switching

For the light output 1-4 outputs and the constant light control, it is possible to make different settings for the ON & OFF values of the lighting, run-on times, brightness values, offset, switch-off behaviour and basic lighting settings via the "Day/Night changeover" parameter.

For each light output and constant light control, there is an input object that can be used to set the light output to "Night operation" can be changed.

5 Remote control, programming mode and feedback LED

5.1 remote control

The remote control functions can be enabled or disabled under General Settings.

5.2 Remote control & programming mode

The sensors of the Control PRO series can be set to KNX programming mode via the IR remote control or Smart Remote and the SmartRemote App.

5.3 Programming mode via push-button

Alternatively, a button is available on the bus coupling unit for activating the programming mode and for programming the physical KNX address with the aid of the ETS.

5.4 Feedback LED

function	colour	manner	remark
Unprogrammed sensor on bus voltage	Blue	flashing	during movement
Initialization of the sensor after download or bus voltage recovery (already parameterized)	Blue	flashing	1x per sec.
Remote control command accepted	Blue	fast flashing	1x
Programming mode KNX	Blue	To	
normal operation		Off	

6 Changing the values via the bus

Some of the setting parameters can be changed via the bus. For the light outputs and constant light control, these are the switching thresholds or setpoints and time settings. The time settings for Presence, Absence and HVAC.

7 Behaviour after bus voltage failure and recovery or restart as well as download

In the event of a bus voltage failure, the detectors of the Control PRO series also fail because their electronics are supplied via the bus voltage. Before a bus voltage failure, all user inputs are stored

(brightness values, delay times, switching thresholds, hystereses and locked objects) so that they can be restored automatically after the bus voltage failure on bus voltage recovery.

After bus voltage recovery and after a complete or partial loading of the product database into the detectors using the ETS (i.e. after a restart), the detector runs through a blocking time of between 10 and 40 seconds. The lighting is switched on at the beginning of the locking period and switched off for approx. 3 seconds at the end of the locking period. From then on, the detector is ready for operation and sends the current telegrams of the outputs.

8 Behavior after first start and unload

If a brand-new detector of the Control PRO series is installed, the integrated LED lights up with every detected movement until the sensor is parameterized. This indicates that bus voltage is present at the detector and that it is ready for programming.

If the presence detector's application program is "unloaded" with the ETS, the detector displays its status via LED, just like after an initial start.

9 communication objects

The communication objects listed below are available at maximum for the presence detector. Which of them are visible and can be linked to group addresses is determined by both the The settings of the "Sensor selection" parameter in the "General settings" parameter window as well as the settings of further parameters for the desired functions and communication objects.

List of communication objects

Obj.	object name	function	DPT	flag
1.	status	status	5.001	KLÜ
2.	Gain factor (HF and US sensors only)	1...100	5.001	KLSÜ
3.	sensitivity	1...100	5.001	KLSÜ
10.	sabotage	ON/OFF	1.001	KLÜ
15.	Output 8-bit scene	Retrieve/Save	18.001	KLÜ
20.	Measured value Brightness	lux	9.004	KLSÜ
25.	Twilight switch output	ON/OFF	1.001	KLÜ
26.	twilight threshold	2...1000 Lux	9.004	KLSÜ
27.	Twilight switch Locks	ON/OFF	1.001	KSÜ
28.	Twilight switch Locks Status	ON/OFF	1.001	KLÜ
35.	Presence output Presence	ON/OFF	1.001	KLÜ

36.	Presence output Follow-up time	1s...65535s	7.005	KLSÜ
37.	presence output switch-on delay	0s...10s	7.005	KLSÜ
38.	Presence output Disable	ON/OFF	1.001	KSÜ
39.	Presence output Disable Status	ON/OFF	1.001	KLÜ
45.	Outgoing absence Absence	ON/OFF	1.001	KLÜ
46.	outgoing absence follow-up time	1s...65535s	7.005	KLSÜ
47.	Absence output Switch-on delay	1s...10s	7.005	KLSÜ
48.	Absence output Locking	ON/OFF	1.001	KSÜ
49.	Outgoing Absence Locks Status	ON/OFF	1.001	KLÜ
55.	Light output 1 Switching	ON/OFF	1.001	KLSÜ
56.	Light output 1 Switching input	ON/OFF	1.001	KSÜ
57.	Light output 1 Dimming value	0...100%	5.001	KLÜ
58.	Light output 1 dim output	brighter/darker	3.007	KLÜ
59.	Light output 1 Dim input	brighter/darker	3.007	KSÜ
60.	Light output 1 Input Dimming value	0...100%	5.001	KSÜ
61.	Light output 1 Scene	Retrieve scene	18.001	KLÜ
62.	Light output 1 Slave input	ON/OFF	1.001	KSÜ
63.	Light output 1 Switching threshold	2...1000 Lux	9.004	KLSÜ
64.	Light output 1 Follow-up time	10s...65535s	7.005	KLSÜ
65.	Light output 1 External brightness	lux	9.004	KSÜ
66.	Light output 1 Night input	ON/OFF	1.001	KSÜ
67.	Light output 1 Disable	ON/OFF	1.001	KSÜ
68.	Light output 1 Disable Status	ON/OFF	1.001	KLÜ
75.	Light output 2 Switching	ON/OFF	1.001	KLSÜ
76.	Light output 2 Switching input	ON/OFF	1.001	KSÜ
77.	Light output 2 Dimming value	0...100%	5.001	KLÜ
78.	Light output 2 dim output	brighter/darker	3.007	KLÜ
79.	Light output 2 Dim input	brighter/darker	3.007	KSÜ
80.	Light output 2 Input Dimming value	0...100%	5.001	KSÜ
81.	Light output 2 Scene	Retrieve scene	18.001	KLÜ
82.	Light output 2 Slave input	ON/OFF	1.001	KSÜ

83.	Light output 2 Switching threshold	2...1000 Lux	9.004	KLSÜ
84.	Light output 2 Follow-up time	10s...65535s	7.005	KLSÜ
85.	Light output 2 External brightness	lux	9.004	KSÜ
86.	Light output 2 Input night	ON/OFF	1.001	KSÜ
87.	Light output 2 Blocks	ON/OFF	1.001	KSÜ
88.	Light output 2 Disable Status	ON/OFF	1.001	KLÜ
95.	Light output 3 Switching	ON/OFF	1.001	KLSÜ

96.	Light output 3 Switching input	ON/OFF	1.001	KSÜ
97.	Light output 3 Dimming value	0...100%	5.001	KLÜ
98.	Light output 3 Dim output	brighter/darker	3.007	KLÜ
99.	Light output 3 Dim input	brighter/darker	3.007	KSÜ
100.	Light output 3 Input Dimming value	0...100%	5.001	KSÜ
101.	Light output 3 Scene	Retrieve scene	18.001	KLÜ
102.	Light output 3 Slave input	ON/OFF	1.001	KSÜ
103.	Light output 3 Switching threshold	2...1000 Lux	9.004	KLSÜ
104.	Light output 3 Follow-up time	10s...65535s	7.005	KLSÜ
105.	Light output 3 External brightness	lux	9.004	KSÜ
106.	Light output 3 Night input	ON/OFF	1.001	KSÜ
107.	Light output 3 Disable	ON/OFF	1.001	KSÜ
108.	Light output 3 Disable Status	ON/OFF	1.001	KLÜ
115.	Light output 4 Switching	ON/OFF	1.001	KLSÜ
116.	Light output 4 Switching input	ON/OFF	1.001	KSÜ
117.	Light output 4 Dimming value	0...100%	5.001	KLÜ
118.	Light output 4 dim output	brighter/darker	3.007	KLÜ
119.	Light output 4 Dim input	brighter/darker	3.007	KSÜ
120.	Light output 4 Input Dimming value	0...100%	5.001	KSÜ
121.	Light output 4 Scene	Retrieve scene	18.001	KLÜ
122.	Light output 4 Slave input	ON/OFF	1.001	KSÜ
123.	Light output 4 Switching threshold	2...1000 Lux	9.004	KLSÜ
124.	Light output 4 Follow-up time	10s...65535s	7.005	KLSÜ
125.	Light output 4 External brightness	lux	9.004	KSÜ

126.	Light output 4 Night input	ON/OFF	1.001	KSÜ
127.	Light output 4 Blocks	ON/OFF	1.001	KSÜ
128.	Light output 4 Disable Status	ON/OFF	1.001	KLÜ
135.	HVAC shifting	ON/OFF	1.001	KLÜ
136.	HVAC mode	0...4	20.001	KLÜ
137.	HVAC follow-up time	10s ... 65535s	7.005	KLSÜ
138.	HVAC switch-on delay	0s ... 65535s	7.005	KLSÜ
139.	HVAC Slave input	ON/OFF	1.001	KSÜ
140.	HVAC blocks	ON/OFF	1.001	KSÜ

141.	HVAC Lock Status	ON/OFF	1.001	KLÜ
150.	Logic gate 1 Input 1	ON/OFF	1.001	KSÜ
151.	Logic gate 1 Input 2	ON/OFF	1.001	KSÜ
152.	Logic gate 1 Input 3	ON/OFF	1.001	KSÜ
153.	Logic gate 1 Input 4	ON/OFF	1.001	KSÜ
154.	Logic gate 1 output	ON/OFF	1.001	KLÜ
155.	Logic gate 1 exit	0...255	5.001	KLÜ
156.	Logic gate 1 Locks	ON/OFF	1.001	KSÜ
157.	Logic gate 1 Disable Status	ON/OFF	1.001	KLÜ
158.	Logic gate 2 Input 1	ON/OFF	1.001	KSÜ
159.	Logic gate 2 Input 2	ON/OFF	1.001	KSÜ
160.	Logic gate 2 Input 3	ON/OFF	1.001	KSÜ
161.	Logic gate 2 Input 4	ON/OFF	1.001	KSÜ
162.	Logic gate 2 Output	ON/OFF	1.001	KLÜ
163.	Logic gate 2 Output	0...255	5.001	KLÜ
164.	Logic gate 2 Locks	ON/OFF	1.001	KSÜ
165.	Logic gate 2 Disable Status	ON/OFF	1.001	KLÜ
170.	Constant light control Setpoint Brightness	2...1000Lux	9.004	KLSÜ
171.	Constant light control Follow-up time	10s...65535s	7.005	KLSÜ
172.	Constant light control Switching 1	ON/OFF	1.001	KLSÜ
173.	Constant light control Dimming value 1	0% ... 100%	5.001	KLÜ
174.	Constant light control Dim output 1	brighter/darker	3.007	KLÜ

175.	Constant light control Input 1 Switching	ON/OFF	1.001	KSÜ
176.	Constant light control Dim input 1	brighter/darker	3.007	KSÜ
177.	Constant light control Input 1 Dimming value	0%...100%	5.001	KSÜ
178.	Constant light control Teach	ON/OFF	1.001	KSÜ
179.	Constant light control Switching 2	ON/OFF	1.001	KLSÜ
180.	Constant light control Dimming value 2	0%...100%	5.001	KLÜ
181.	Constant light control Dim output 2	brighter/darker	3.007	KLÜ
182.	Constant light control Input 2 Switching	ON/OFF	1.001	KSÜ
183.	Constant light control Dim input 2	brighter/darker	3.007	KSÜ
184.	Constant light control Input 2 Dimming value	0%...100%	5.001	KSÜ
185.	Constant light control Slave input	ON/OFF	1.001	KSÜ
186.	Constant light control Brightness external	lux	9.004	KSÜ
187.	constant light control External brightness (DUAL light sensor only)	lux	9.004	KSÜ
188.	Constant light control Night input	ON/OFF	1.001	KSÜ
189.	Constant light control Blocks	ON/OFF	1.001	KSÜ
190.	Constant light control Disable Status	ON/OFF	1.001	KLÜ

9.1 Description Communication object Status

object	Description of the
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status	<p>This object is always present.</p> <p>This object is used to return whether the selected sensor under the parameter Sensor selection in the general ice settings matches the attached sensor. If the corresponding sensor type is returned, the combination does not match, an error is returned, and the sensor does not work. Product and associated hex value:</p> <p>Error 0x00 IR Quattro 0x01 IR Quattro HD 0x02 HF 360 0x03 Dual HF 0x04 DualTech 0x05 US 360 0x06 Single US 0x07 Dual US 0x07</p>
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9.2 Description Communication objects Gain factor (HF & US sensors) and sensitivity

object	Description of the
amplification factor	This object is always available when an HF or US presence detector is selected. This object is used to set the gain factor for the range of the sensor.
sensitivity	This object is always present. This object is used to determine the sensitivity of the sensor in order to avoid faulty switching if necessary.

9.3 Description Communication objects Light output X (1..4)

object	Description of the
Light output X Switching	This object is always present when the light output is activated. The light output X is switched with this object.

object	Description of the
	Via the group address linked with this object, the switching command is sent to the actuator via the bus or the switching status can be queried from the detector.
Light output X Switch input	<p>This object is always present when the light output is activated.</p> <p>If the "Light output mode" parameter is set to "automatically ON and OFF" and a telegram is received via this object, light output X is blocked because the room user wishes to permanently switch the light output on or off. It remains disabled until either a telegram for enabling is received via the "Light output X Disable" object or until the detector detects that no person is left in the room, releases light output X again and switches it off.</p> <p>If the parameter "Light output mode" is set to "automatic OFF" and a telegram "1" is received via this object, the light output X is switched on for the set follow-up time. Each detected presence in the switched-on state triggers the follow-up time. If a "0" is received, the light output X switches off without blocking.</p>
Light output X Dimming value	<p>This object is only visible if the "Object light output" parameter is set to "Dimming value" is set.</p> <p>Via the group address linked with this object, the dimming value is sent to the actuator via the bus or can be queried from the detector.</p>

Light output X Dim output	<p>This object is only visible if the "Light output object" parameter is set to "Dimming value".</p> <p>The brighter/darker telegram, which is set via the input, is sent to the actuator via the bus via the group address linked with this object.</p>
Light output X Dim input	<p>This object is only visible if the "Light output object" parameter is set to "Dimming value".</p> <p>If a telegram is received via this object, light output X is blocked because the room user wants the light output to be permanently set to a different dimming value. It remains blocked until either a telegram for enabling is received via the "Light output X Disable" object or until the detector detects that no person is left in the room, releases the light output X again and switches it off. When enabled, the light output X transmits its set value via the bus.</p>
Light output X Input Dimming value	<p>This object is only visible if the "Light output object" parameter is set to "Dimming value".</p> <p>If a telegram is received via this object, light output X is blocked because the room user wants the light output to be permanently set to a different dimming value. It remains locked until either the</p> <p>Object "Light output X disable" a telegram for enabling is received or until the detector detects that no person is left in the room, releases the light output X again and switches it off. When enabled, the light output X transmits its set value via the bus.</p>
Light output X Scene	<p>This object is only visible if the "Light output object" parameter is set to "Scene".</p> <p>Via the group address linked with this object, the scene is sent to the actuator via the bus or can be queried from the detector.</p>
Light output X Slave input	<p>This object is only visible if the "Slave input" parameter is not set to "inactive".</p> <p>Via the group address linked with this object, the presence status of the slave is received via the bus, if necessary linked with the presence status of other slaves as well as that of the sensor via a logical OR function and evaluated as the total presence of the light output X. The presence status of the slave is also evaluated as the total presence of the light output X. The presence status of the slave is also evaluated as the total presence of the light output X.</p>
Light output X Switching threshold	<p>This object is always present when the light output is activated.</p> <p>Via the group address linked to this object, the switching threshold (in lux) for the light output is received or can be queried via the bus.</p>
Light output X Follow-up time	<p>This object is always present when the light output is activated.</p> <p>The group address linked to this object is used to receive the follow-up time for light output X via the bus. A received value that is outside the allowed range is discarded. The current follow-up time can also be queried via this object.</p>
Light output X Brightness External	<p>This object is only visible if the "Brightness sensor ON" parameter is set to "External".</p> <p>The group address linked to this object is used to specify the group address specified by a</p>
object	Description of the
	brightness sensor and compared with the switching threshold.
Light output X Night input	<p>This object is only visible if the "Day/Night changeover" parameter is not set to "Inactive".</p> <p>The switchover between day and night is received via the group address linked with this object. With a "0", the parameters for the day are activated. With a "1" the parameters for the night are activated.</p>
Light output X Disable	<p>This object is only visible if the "Disable output" parameter is not set to "No".</p> <p>The "Disable output" parameter is also used to set whether disabling is to be performed by a received value of "1" or a received value of "0". If the output is blocked, the output does not send any telegrams.</p> <p>An exception to this is a manual override via the input objects.</p>

Light output X Disable Status	<p>This object is only visible if the "Disable output" parameter is not set to "No" is set.</p> <p>Via the group address linked to this object, the disable status is automatically sent via the bus for each change or the disable status can be queried at any time.</p>
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9.4 Description Communication objects Constant light control

object	Description of the
Constant light control Setpoint brightness	<p>This object is always present when constant light control is activated.</p> <p>Via the group address linked to this object, the setpoint (in lux) for constant lighting control is received via the bus or can be queried at any time.</p>
Constant light control Follow-up time	<p>This object is always present when constant light control is activated.</p> <p>The group address linked to this object is used to receive the follow-up time for constant light control via the bus. A received value that is outside the allowed range is discarded. The current follow-up time can also be queried via this object.</p>
Constant light control Switching 1	<p>This object is always present when constant light control is activated.</p> <p>Depending on the "Send switching objects" parameter, the group address linked with this object will send the switching command to the actuator via the bus or the switching status can be queried from the detector.</p>
Constant light control Dimming value 1	<p>This object is always present when constant light control is activated.</p> <p>Via the group address linked with this object, the dimming value is sent to the actuator via the bus or can be queried from the detector.</p>
Constant light control Dim output 1	<p>This object is always present when constant light control is activated.</p> <p>The brighter/darker telegram, which is set via the input, is sent to the actuator via the bus via the group address linked with this object.</p>
Constant light control Switch input 1	<p>This object is always present when constant light control is activated.</p> <p>If the "Constant lighting control mode" parameter is set to "automatically ON and OFF" and a telegram is received via this object, constant lighting control is disabled because the room user wishes to permanently switch constant lighting control on or off. It remains blocked until either a telegram for enabling is received via the "Disable constant lighting control" object or until the detector detects that there is no longer a person in the room who enables constant lighting control again and switches it off.</p> <p>If the "Constant lighting control mode" parameter is set to "automatically OFF" and a telegram "1" is received via this object, constant lighting control is switched on for the set follow-up time. Each detected presence in the switched-on state triggers the follow-up time. If a "0" is received, the constant lighting control switches off without blocking.</p>
Constant light control Dim input 1	<p>This object is always present when constant light control is activated.</p> <p>If a telegram is received via this object, constant lighting control is either disabled and the associated output dimmed accordingly, or light-level control is not disabled and the setpoint for constant lighting control is shifted in the direction of greater or smaller, depending on the setting of the "Dim light-level control with input" parameter, which automatically results in brighter or darker dimming of the lighting. If the detector detects that no person is left in the room, a shifted brightness setpoint is reset to its original value and constant lighting control is switched off.</p>

object	Description of the
Constant light control Input 1 Dimming value	<p>This object is always present when constant light control is activated.</p> <p>If a telegram is received via this object, constant lighting control is disabled and the associated output is dimmed accordingly. If the detector detects that there is no person left in the room, the lock is released and the lighting is switched off.</p>
Constant light control Teach	<p>This object is always present when constant light control is activated.</p> <p>The group address linked with this object is used to carry out the artificial light adjustment with a "1" telegram.</p>

Constant light control Switching 2	This object is only visible if the parameter "2nd output" is set to "active". Depending on the "Send switching objects" parameter, the group address linked with this object will send the switching command to the actuator via the bus or the switching status can be queried from the detector.
Constant light control Dimming value 2	This object is only visible if the parameter "2nd output" is set to "active". Via the group address linked with this object, the dimming value is sent to the actuator via the bus or can be queried from the detector.
Constant light control Dim output 2	This object is only visible if the parameter "2nd output" is set to "active". The brighter/darker telegram, which is set via the input, is sent to the actuator via the bus via the group address linked with this object.
Constant light control Switch input 2	This object is only visible if the parameter "2nd output" is set to "active". If the "Constant lighting control mode" parameter is set to "automatically ON and OFF" and a telegram is received via this object, constant lighting control is disabled because the room user wishes to permanently switch constant lighting control on or off. It remains blocked until either a telegram for enabling is received via the "Disable constant lighting control" object or until the detector detects that there is no longer a person in the room who enables constant lighting control again and switches it off. If the "Constant lighting control mode" parameter is set to "automatically OFF" and a telegram "1" is received via this object, constant lighting control is switched on for the set follow-up time. Each detected presence in the switched-on state triggers the follow-up time. If a "0" is received, the constant lighting control switches off without blocking.
Constant light control Dim input 2	This object is only visible if the parameter "2nd output" is set to "active". If a telegram is received via this object, constant lighting control is either disabled and the associated output dimmed accordingly, or light-level control is not disabled and the setpoint for constant lighting control is shifted in the direction of greater or smaller, depending on the setting of the "Dim light-level control with input" parameter, which automatically results in brighter or darker dimming of the lighting. If the detector detects that no person is left in the room, a shifted brightness setpoint is reset to its original value and constant lighting control is switched off.
Constant light control Input 2 Dimming value	This object is only visible if the parameter "2nd output" is set to "active". If a telegram is received via this object, constant lighting control is disabled and the associated output is dimmed accordingly. If the detector detects that there is no person left in the room, the lock is released and the lighting is switched off.
Constant light control Slave input	This object is only visible if the parameter "Slave input" is not set to "inactive". Via the group address linked with this object, the presence status is received from the slave via the bus, if necessary linked with the presence status of other slaves as well as that of the sensor via a logical OR function and evaluated as the overall presence of constant light control.
Constant light control Brightness External	This object is only visible if the "Brightness sensor" parameter is set to "External" is set. Via the group address linked to this object, the measured brightness value measured by a brightness sensor is received and compared with the set setpoint.
Constant light control Night input	This object is only visible if the "Day/Night changeover" parameter is not set to "Inactive".
object	Description of the
	The switchover between day and night is received via the group address linked with this object. With a "0", the parameters for the day are activated. With a "1" the parameters for the night are activated.

Constant light control Blocks	This object is only visible if the "Disable output" parameter is not set to "No". The "Disable output" parameter is also used to set whether disabling is to be performed by a received value of "1" or a received value of "0". If the output is blocked, a manual override can be carried out via the input objects.
Constant light control Disable Status	This object is only visible if the "Disable output" parameter is not set to "No" is set. Via the group address linked to this object, the disable status is automatically sent via the bus for each change or the disable status can be queried at any time.

9.5 Description Communication objects Presence output

object	Description of the
Presence output Presence	This object is always present when the presence output is activated. Via the group address linked with this object, the bus sends to the actuator whether the presence of persons has been detected (output="ON") or not (output="OFF") or whether the presence status can be queried at the detector at any time.
Presence output Follow-up time	This object is always present when the presence output is activated. The follow-up time for the presence output is received via the bus via the group address linked with this object. A received value that is outside the allowed range is discarded. The current follow-up time can also be queried via this object.
presence output switch-on delay	This object is always present when the presence output is activated. The group address linked with this object is used to receive the switch-on delay for the presence output via the bus. A received value that is outside the allowed range is discarded. The current follow-up time can also be queried via this object.
Presence output Disable	This object is only visible if the "Disable output" parameter is not set to "No". The "Disable output" parameter is also used to set whether disabling is to be performed by a received value of "1" or a received value of "0". If the output is blocked, the output does not send any telegrams.
Presence output Disable Status	This object is only visible if the "Disable output" parameter is not set to "No" is set. Via the group address linked to this object, the disable status is automatically sent via the bus for each change or the disable status can be queried at any time.

9.6 Description of communication objects Absence output

object	Description of the
Outgoing absence Absence	This object is always available when the outbox is activated. Via the group address linked with this object, the bus sends to the actuator whether the absence of persons has been detected (output="ON") or not (output="OFF") or whether the absence status can be queried at the detector at any time.
Absence output Follow-up time	This object is always available when the outbox is activated. The follow-up time for the absence output is received via the bus via the group address linked with this object. A received value that is outside the allowed range is discarded. The current follow-up time can also be queried via this object.
Absence output Switch-on delay	This object is always available when the outbox is activated. The group address linked with this object is used to set the
object	Description of the

	Receive switch-on delay for the absence output. A received value that is outside the allowed range is discarded. The current follow-up time can also be queried via this object.
Absence output Locking	This object is only visible if the "Disable output" parameter is not set to "No". The "Disable output" parameter is also used to set whether disabling is to be performed by a received value of "1" or a received value of "0". If the output is blocked, the output does not send any telegrams.
Outgoing Absence Locks Status	This object is only visible if the "Disable output" parameter is not set to "No". Via the group address linked to this object, the disable status is automatically sent via the bus for each change or the disable status can be queried at any time.

9.7 Description Communication objects HVAC

object	Description of the
HVAC shifting	This object is always present when the HVAC output is activated and the output object bit type is selected. This object must be connected to the presence input of the room temperature controller via which the room operating mode is switched between "Comfort mode" and "Energy-saving mode". Via the group address linked with this object, the HVAC status is sent to the controller via the bus or can be queried from the detector.
HVAC mode	This object is always present when the HVAC output is activated and the output object bit type is selected. This object must be connected to the presence input of the room temperature controller in order to send the Auto, Comfort, Stand-By, Economy or Building Protection room operating mode to the controller. Via the group address linked with this object, the HVAC status is sent to the controller via the bus or can be queried from the detector.
HVAC follow-up time	This object is always present when the HVAC output is activated. The follow-up time for the HVAC output is received via the bus via the group address linked with this object. A received value that is outside the allowed range is discarded. The current follow-up time can also be queried via this object.
HVAC switch-on delay	This object is always selected present when the HVAC output is activated. The group address linked to this object is used to receive the switch-on delay for the HVAC output via the bus. A received value that is outside the allowed range is discarded. The current follow-up time can also be queried via this object.
HVAC Slave input	This object is only visible if the "Slave input" parameter is not set to "inactive". Via the group address linked with this object, the presence status is received from the slave via the bus, if necessary linked with the presence status of other slaves as well as that of the sensor via a logical OR function and evaluated as the overall presence of the HVAC control.
HVAC blocks	This object is always active when the HVAC output is activated and when the parameter "Disable output" is not set to "No" is present. The "Disable output" parameter is also used to set whether disabling is to be performed by a received value of "1" or a received value of "0".
HVAC Lock Status	This object is only visible if the "Disable output" parameter is not set to "No" is set. Via the group address linked to this object, the disable status is automatically sent via the bus for each change or the disable status can be queried at any time.

9.8 Description Communication objects Twilight switch

object	Description of the
exit twilight switch	This object is always present when the twilight switch outputs are activated. The group address linked with this object is used to send the measured brightness to the actuator via the bus if it is below the set twilight threshold (output="ON") or not (output="OFF") or if the twilight switch status can be queried from the detector at any time.
twilight threshold	This object is always present when the twilight switch is activated. Via the group address linked to this object, the switching threshold (in lux) for the light output is received or can be queried via the bus.
Twilight switch Locks	This object is always present if the twilight switch output is activated and the "Disable output" parameter is not set to "No". The "Disable output" parameter is also used to set whether disabling is to be performed by a received value of "1" or a received value of "0".
Twilight switch Locks Status	This object is only visible if the "Disable output" parameter is not set to "No". Via the group address linked to this object, the disable status is automatically sent via the bus for each change or the disable status can be queried at any time.

9.9 Description Communication objects Brightness

object	Description of the
Measured value Brightness	This object is always present when the brightness output is activated. Via the group address linked with this object, the internal brightness value measured by the detector is sent via the bus or can be queried from the detector.

9.10 Description Communication object Sabotage

object	Description of the
sabotage	This object is always present when the sabotage output is activated. An ON/OFF telegram is sent in certain cycles to the group address linked to this object, while the sensor has not been disconnected from the bus or is defective.

9.11 Description Communication object Output 8-bit Scene

object	Description of the
Output 8-bit scene	This object is always present when the User remote control is activated. The output outputs the number of the activated scene defined in the parameters.

9.12 Description Communication objects Logic gate X (1..2)

object	Description of the
Logic gate X Input 1	This object is always present when the logic gate is activated. The group address linked to this object is used to control the logic input of the logic gate. The inputs can be linked depending on the "Type of link" parameter.

Logic gate X Input 2	This object is always present if at least one logic gate is activated and the "Number of inputs" parameter is greater than or equal to two inputs. The group address linked to this object is used to control the logic input of the logic gate. The inputs can be linked depending on the "Type of link" parameter.
object	Description of the
Logic gate X Input 3	This object is always present if at least one logic gate is activated and the "Number of inputs" parameter is greater than or equal to three inputs. The group address linked to this object is used to control the logic input of the logic gate. The inputs can be linked depending on the "Type of link" parameter.
Logic gate X Input 4	This object is always present if at least one logic gate is activated and the "Number of inputs" parameter is greater than or equal to four inputs. The group address linked to this object is used to control the logic input of the logic gate. The inputs can be linked depending on the "Type of link" parameter.
Logic gate X output 1 bit	This object is only visible if the "Logic gate" parameter in the "General parameters" parameter window is set to "active" and the "Logic gate X type" parameter is set to "active". Output object" is set to "ON/OFF". Via the group address linked with this object, the initial state is sent to the actuator via the bus or can be queried from the detector.
Logic gate X output 1 byte	This object is only visible if the "Logic gate" parameter in the "General parameters" parameter window is set to "active" and the "Logic gate X type" parameter is set to "active". Output object" is set to "Value". Via the group address linked with this object, the output value is sent to the actuator via the bus or can be queried from the detector.
Logic gate X Locks	This object is always present when the logic gate is activated. The "Disable output" parameter is also used to set whether disabling is to be performed by a received value of "1" or a received value of "0". If the output is blocked, the output does not send any telegrams.
Logic gate X Lock status	This object is only visible if the "Disable output" parameter is not set to "No" is set. Via the group address linked to this object, the disable status is automatically sent via the bus for each change or the disable status can be queried at any time.

10 ETS parameters

Note on the colors in the parameter settings:

	Parameter always available. From here downwards, all parameter-dependent colors are reset.
	Parameter only visible depending on a setting of another parameter. Setting and dependent parameters are marked in the identical color.
	Parameter only visible depending on settings of two other parameters. Setting and dependent parameters are marked in the identical color.

10.1 General parameters

General parameters		
name	settings	factory setting
Sensor selection	IR Quattro IR Quattro HD HF 360 DUAL HF	DUAL HF
General parameters		
name	settings	factory setting
	dual technology US 360 Single US DUAL US	
Please select the sensor used.		
Number Light output	0...4	1
This parameter is used to set how many light outputs are to be available.		
constant light control	inactive active	inactive
<u>Active:</u> The constant light control output with the associated parameters is also available. <u>inactive:</u> The constant light control output is not available.		
presence output	inactive active	inactive
<u>active:</u> The Presence output with the associated parameters is also available. <u>inactive:</u> The Presence output is not available.		
outgoing absence	inactive inactive active	
<u>Active:</u> The Absence output with the associated parameters is also available. <u>Inactive:</u> The outcome Absence is not available.		
HVAC output	inactive active	inactive
<u>active:</u> The HVAC output with the associated parameters is also available. <u>Inactive:</u> The HVAC output is not available.		
Twilight switch output	inactive active	inactive
<u>active:</u> The output twilight switch with the associated parameters is also available. <u>inactive:</u> The twilight output is not available.		
brightness output	inactive active	inactive
<u>active:</u> The Brightness output with the associated parameters is also available. <u>Inactive:</u> The Brightness output is not available.		
sabotage	inactive active	inactive
<u>active:</u> The sabotage output with the associated parameters is also available. <u>Inactive:</u> The output Sabotage is not available.		
logic gate	inactive 1 ... 2	inactive
1 ... 2: <u>In</u> addition, the set number of logic gates with the associated parameters is available. <u>inactive:</u> The output logic gate is not available.		
remote control	inactive program user Program & User	inactive

inactive: The IR receiver integrated in the detector is deactivated.

Program: It is enabled that the service personnel, without using the ETS, can use a special IR remote control to change some detector parameters (e.g. switch-on delay, delay times and the brightness setpoint).

User: It is enabled that the room user with the help of a small IR remote control switches and dims the lighting, up to 4 scenes and recall and reactivate (enable) the brightness control.

Program & User: Switching, dimming and scene control as well as changing detector parameters via IR remote control are enabled.

10.2 Sensor Settings

Sensor Settings		
name	settings	factory setting
Gain factor (HF & US only)	1...100%	100%
With this parameter the range for US and HF presence detectors can be set in 1% steps.		
Sensor Settings		
name	settings	factory setting
will be.		
sensitivity	1...100%	100%
If the sensitivity setting is low, several motion triggers are required to trigger motion detection. In case of faulty switching, this function can be used to filter out short single interference signals. Unlike the gain factor, this setting does not reduce the range.		
First presence (DualTech only)	US and IR	US or IR
	US or IR	
	IR	
	US	
This parameter is used to select the technology(s) used for initial acquisition for switching.		
Maintain presence (DualTech only)	US and IR	US or IR
	US or IR	
	IR	
	US	
This parameter is used to select the technologies used to maintain presence (retriggering).		

10.3 Light output 1..4

Light output 1...4		
name	settings	factory setting
General parameters		
Object Light output	ON / OFF	ON / OFF
	dimming value	
	scene	
This parameter is used to set the object with which the output transmits.		
Switch-on value in percent	0%...100%	100%
This parameter is used to set which dimming value is sent for the ON state.		
Switch-off value in percent	0%...100%	0%
This parameter is used to set which dimming value is sent for the OFF state.		
Send switching objects	ON / OFF ON OFF	ON / OFF
This parameter is used to set whether the switching commands ON and OFF or only ON or only OFF are to be transmitted with the object setting Dimming value.		

Switch on scene	1...64	1
This parameter is used to set which scene is sent for the ON state.		
Deactivate scene	1...64	2
This parameter is used to set which scene is sent for the OFF state.		
Send status cyclically	Do not send status cyclically	
	ON/OFF	
	ON	
	OFF	
This parameter is used to set whether the output is to be sent cyclically not only after each change but also after each change and at which status. <u>Do not send status cyclically</u> : No status is sent cyclically. <u>ON/OFF</u> : The status ON and OFF is sent cyclically <u>ON</u> : Only the status ON is sent cyclically. <u>OFF</u> : Only the OFF status is sent cyclically.		
Send cyclically Interval	hh:mm:ss	00:00:30
Time interval for cyclic transmission. The maximum time interval is 18:12:15.		
Light output mode	automatic ON and OFF only automatic OFF	automatic ON and OFF
This parameter is used to set whether the light output is switched on and off automatically.		

Light output 1...4		
name	settings	factory setting
(fully automatic) or whether it should only be switched off automatically (semi-automatic).		
Follow-up time IQ mode	active	inactive
	Inactive	
This parameter is used to set whether the follow-up time of the light output is selected via a Parameter (inactive) or whether the IQ mode is to automatically and continuously adapt the follow-up time between 5 and 20 minutes to room use (active).		
Follow-up time light output	hh:mm:ss	00:05:00
The follow-up time is not started if there is no presence detection. It is used to prevent the output from being switched off immediately when the room is briefly left and from being switched on again when the user returns to the room. The follow-up time can be set from 00:00:10 to 18:12:15.		
Slave input	inactive ON ON/OFF	ON
This parameter determines whether the slave input expects an ON telegram or an ON and OFF telegram.		
brightness		
daytime operation	Yes	NO
	No	
Setting whether the light output should switch independently of the brightness.		
Brightness sensor ON	Internal	Internal
	External	
This parameter defines the brightness measurement with which the sensor compares its switching threshold.		
Start value brightness sensor external	2Lux ... 1000Lux	200
This parameter defines the value with which the sensor works until the first value has been received via the KNX bus.		
External brightness sensor weighting	1% ... 100%	100%
This value determines how strongly the external value is weighted.		
Switching threshold ON	2Lux...1000Lux	500
This parameter is used to set the brightness and detected presence at which the light output switches on.		

Switch off depending on brightness	Yes	Yes
	No	
<p><u>Yes:</u> The light output is switched off when there is sufficient brightness despite presence detection. <u>No:</u> The light output remains switched on until the follow-up time has elapsed. The follow-up time is re-triggered during presence detection.</p>		
Offset Switching threshold OFF	10Lux...1000Lux	100
This parameter is used to set the offset from which the light output is switched off.		
Basic lighting (only visible if light output = dimming value)		
basic lighting	inactive	inactive
	active	
Setting whether the basic illumination should be activated.		
Basic lighting ON	time-limited	time-limited
	depending on brightness	
	dim	
	all the time	
<p>If desired, basic lighting can be activated either for a limited time after the end of the follow-up time or whenever the brightness falls below a threshold value.</p> <p><u>time-limited:</u> At the end of the follow-up time, the output switches the lighting to the basic lighting if the detector has been parameterised in day mode or the currently measured brightness is below the switching threshold ON + offset switching threshold OFF. <u>depending on brightness:</u> If no presence is detected by the detector, the output is not</p>		

Light output 1...4		
name	settings	factory setting
<p>but the basic illumination is activated if the brightness measured by the sensor is below the basic brightness threshold at this time. It remains switched on until either presence is detected or until the measured brightness significantly exceeds the threshold value for basic brightness. The setting of the brightness measurement is determined by the parameter "Brightness measurement ON" is used.</p> <p><u>dimming:</u> The sensor automatically dims the illumination step by step until it switches off. <u>always:</u> The basic illumination is always active when the output is not switched on.</p>		
Basic lighting Dimming value	1%...100%	10
This parameter is used to set the dimming value to which the basic lighting is switched on.		
Basic lighting Threshold value	2Lux ...1000Lux	50
This parameter is used to set the threshold value below which the basic illumination is activated and significantly exceeds which it is deactivated again. This occurs regardless of whether persons are within the detection range or not.		
Basic lighting Duty cycle	hh:mm:ss	00:15:00
The basic lighting is switched off after the set duty cycle has elapsed. The duty cycle is adjustable from 00:00:10 to 18:12:15.		
Day Night Parameter		
Day Night Changeover	inactive	inactive
	active	
When day/night switching is activated, the parameter setting can be switched over via an input object.		
Switch-on value in percent (only for General Parameters: Object light output dimming value)	0%...100%	100%
This parameter is used to set which dimming value is sent for the ON state.		
Switch-off value in percent (only for General Parameters: Object light output dimming value)	0%...100%	0%
This parameter is used to set which dimming value is sent for the OFF state.		

Switch on scene (only for General Parameters: Object light output scene)	1...64	1
This parameter is used to set which scene is sent for the ON state.		
Deactivate scene (only for General Parameters: Object light output scene)	1...64	2
This parameter is used to set which scene is sent for the OFF state.		
daytime operation	Yes	No
	No	
Setting whether the light output should switch independently of the brightness.		
Switching threshold ON	2 Lux...1000 Lux	500
This parameter is used to set the brightness and detected presence at which the light output switches on.		
Switch off depending on brightness	Yes	No
	No	
This parameter is used to set whether the light output should switch off depending on brightness despite presence.		
Offset Switching threshold OFF	10 Lux...1000 Lux	100
This parameter is used to set the offset from which the light output is switched off.		
Follow-up time light output	hh:mm:ss	00:05:00
The follow-up time is not started if there is no presence detection. It is used to prevent the output from being switched off immediately when the room is only briefly left and from being switched on again when the user returns to the room. The follow-up time can be set from 00:00:10 to 18:12:15.		
Basic lighting Dimming value (only with basic lighting: basic lighting active and basic lighting:	1%...100%	10
Light output 1...4		
name	settings	factory setting
Basic lighting ON time-limited, depending on brightness and always)		
This parameter is used to set the dimming value to which the basic lighting is switched on.		
Basic illumination Threshold value (only for basic illumination: basic illumination active and basic illumination: Basic lighting ON dependent of brightness)	2Lux ...1000Lux	50
This parameter is used to set the threshold value below which the basic illumination is activated and significantly above which it is deactivated. This occurs regardless of whether persons are within the detection range or not.		
Basic lighting Duty cycle (only with basic lighting: basic lighting active and basic lighting: basic lighting ON time-limited)	hh:mm:ss	00:15:00
The basic lighting is switched off after the set duty cycle has elapsed.		
blocks		
Disable output	No	No
	Disable with ON / Enable with OFF	

	Disable with OFF / Enable with ON	
<p>This parameter is used to set whether the output can be disabled and with which telegram the output is disabled and enabled again. <u>No</u>: The output cannot be disabled.</p> <p><u>Disable with ON / Enable with OFF</u>: The output is disabled by a telegram with the value "1" to the disable object and enabled by a telegram "0".</p> <p><u>Disable with OFF / Enable with ON</u>: The output is disabled by a telegram with the value "0" to the disable object and enabled by a telegram "1".</p>		
Behaviour with locks	no action ON OFF	no action
<p>This parameter is used to set whether the output is to be switched on or off before being disabled or whether the output remains unchanged.</p> <p><u>No action</u>: No further action takes place before the lock.</p> <p><u>ON</u>: Before locking, the output is switched on.</p> <p><u>OFF</u>: Before locking, the output is switched off.</p>		
Behaviour on release	Continue regulation ON OFF	Continue regulation
<p>This parameter is used to set whether the output resumes its activity after release or whether the output is switched on or off first.</p> <p><u>Continue regulation</u>: The output is immediately in normal operation and sets the output depending on the configuration.</p> <p><u>ON</u>: After release, the output is switched on. After a waiting period of 5 seconds, normal operation is reactivated.</p> <p><u>OFF</u>: After release, the output is switched on. After a waiting period of 5 seconds, normal operation is reactivated.</p>		

10.4 constant light control

constant light control		
name	settings	factory setting
General parameters		
Constant light control mode	Automatic ON and OFF	Automatic ON and OFF
	Automatic only OFF	
	motion-independent	

constant light control		
name	settings	factory setting
<p>This parameter is used to select whether constant lighting control depends on presence and brightness value (automatic ON and OFF & only automatic OFF) or whether it depends only on brightness value regardless of movement.</p>		
Slave input	inactive ON ON/OFF	ON
<p>This parameter determines whether the slave input expects an ON telegram or an ON and OFF telegram.</p>		
follow-up time constant light control	hh:mm:ss	00:05:00
<p>The follow-up time is not started if there is no presence detection. It is used to prevent the output from being switched off immediately when the room is briefly left and from being switched on again when the user returns to the room.</p> <p>The follow-up time can be set from 00:00:10 to 18:12:15.</p>		
Automatic start value	Yes	Yes
	No	
<p><u>Yes</u>: The sensor automatically determines the start value after an artificial light adjustment. <u>No</u>: The sensor always starts with the preset start value.</p>		

Start value Dimming level up to the first teach	1% ... 100%	80
This parameter defines the switch-on value when constant lighting control is started. The value is taken over until the artificial light is adjusted. The sensor then determines the start value in order to hit the brightness setpoint as accurately as possible.		
Start value Dimming level	1% ... 100%	80
This parameter defines the switch-on value when constant lighting control is started.		
Send switching objects	ON / OFF ON OFF	ON / OFF
This parameter is used to set whether the switching commands ON and OFF or only ON or only OFF are to be transmitted.		
Dim transmission behaviour at input	Processing	Pass on
	Pass on	
<u>Process:</u>		
<u>Pass it on:</u>		
Brightness control with input dimming	lock and dim	
	Do not block and shift setpoint	
<u>Locking and dimming:</u> Constant lighting control is not disabled after a telegram has been received via the dimming object. After receiving a telegram, the system waits approx. 5 seconds and then accepts the new brightness value as the setpoint. This setting is recommended when only one output is used for room lighting.		
<u>Do not lock and shift setpoint:</u> If a telegram is received via the dimming object, light-level control is disabled and the addressed output is dimmed. This setting is recommended if the room lighting consists of several luminaire groups.		
2nd output	inactive	inactive
	active	
With this parameter a second output can be activated.		
Offset 2nd output	-100% ... 100%	
This parameter is used to set the offset value of the second output to the offset value of the brightness controller for the first output must be added or subtracted. (depending on whether the second output is further away from the window or closer to the window than output one), so that on a workstation below output two the brightness corresponds approximately to the set brightness value set for output one.		
brightness		
Brightness setpoint	2Lux ... 1000Lux	500
This parameter is used to set the setpoint for brightness control.		
brightness sensor	Internal	Internal
constant light control		
name	settings	factory setting
	External	
This parameter activates an input object for an external brightness measurement. This value is used instead of the internal brightness measurement.		
Start value brightness sensor external	2Lux ... 1000Lux	200
This parameter defines the value with which the sensor works until the first value is received via the KNX bus.		
External brightness sensor weighting	1% ... 100%	100%
This value determines how strongly the external value is weighted.		

Max. Deviation from nominal value	10Lux ... 1000Lux	30
<p>The parameter determines how exactly the desired brightness setpoint is controlled. This is necessary because the control is carried out via dimming steps. Therefore, if the maximum value is set too small, it may be</p> <p>Deviations from the set point occur when the set point is already exceeded in a further "brighter" control step and falls below again in a "darker" control step. This leads to constant dimming up and down (i.e. constant fluctuations in brightness). If this is the case, either the max. permissible load must be exceeded or the max. permissible load must be exceeded.</p> <p>deviation from the setpoint or the step size can be reduced during dimming.</p>		
Max. Step size for dimming	0,5%; 1%; 1,5%; 2%; 2,5%; 3%; 5%	2%
<p>This parameter is used to set the maximum "step size" for dimming (this is the maximum value by which a new dimming value for constant lighting control may be larger or smaller than the previous one).</p> <p><u>Note:</u> The larger the "Max. step size for dimming", the larger the "Max. deviation from setpoint" should be.</p>		
Send new dimming value after	0.5s; 1s; 2s; 3s; 4s; 5s	2s
<p>This parameter is used to set the waiting time after which a new dimming value is sent for constant lighting control. This ensures that even with short dimming times of the actuator, no abrupt change in brightness is produced by the constant light control, which a room user finds unpleasant.</p>		
Lighting with sufficient daylight	switch off	switch off
	dimming to minimum dimming value	
<p>This parameter is used to set whether the lighting is to be switched off completely when constant light control is active and sufficient daylight is available, or whether it is to remain switched <u>off</u> dimmed to the adjustable "minimum dimming value": The lighting is switched off if the dimming value remains dimmed to the minimum level for a certain time. If the follow-up time expires before that, the output switches off directly.</p> <p><u>dim to minimum dimming value:</u> The lighting remains switched on and dimmed to the "minimum dimming value", even if the dimming value determined by the light-level controller is below the set "minimum dimming value". It is only dimmed brighter again when the dimming value determined by the brightness controller is above the set "minimum dimming value".</p>		
minimum dimming value	0,5%; 1%; 2%; 3%; 4%; 5%; 6%; 7%; 8%; 9%; 10%	0,5%
<p>If the constant lighting control determines a dimming value that is below the value set here, the lighting remains dimmed to the minimum dimming value.</p>		
basic lighting		
basic lighting	inactive	inactive
	active	
<p>If desired, the output can be activated either for a limited time after the end of the follow-up time or always for a basic illumination when the brightness falls below a threshold value.</p>		
Basic lighting ON	time-limited	time-limited
	depending on brightness	
	dim	
	all the time	
<p><u>time-limited:</u> At the end of the follow-up time, the output switches off the lighting and checks the brightness for max. 5 seconds. As soon as the setpoint or the switching threshold falls below the adjusted</p>		
constant light control		
name	settings	factory setting
<p>brightness, the basic illumination is switched on for the parameterised time. If the measured brightness is above this value, the lighting is off.</p> <p><u>depending on brightness:</u> If the measured brightness is below the setpoint and the output is not switched on, the basic illumination is activated. <u>always:</u> The basic illumination is always active when the output is not switched on.</p>		

Basic lighting Dimming value	1%...100%	10
This parameter is used to set the dimming value to which the basic lighting is switched on.		
Basic lighting Duty cycle	hh:mm:ss	00:15:00
The basic lighting is switched off after the set duty cycle has elapsed. The duty cycle is adjustable from 00:00:10 to 18:12:15.		
Basic lighting Threshold value	2Lux ...1000Lux	50
This parameter is used to set the threshold value below which the basic illumination is activated and significantly exceeded and deactivated again. This occurs regardless of whether persons are within the detection range or not.		
Day Night Parameter		
Day Night Changeover	inactive active	inactive
When day/night switching is activated, the parameter setting can be switched over via an input object.		
follow-up time constant light control	hh:mm:ss	00:05:00
The follow-up time is not started if there is no presence detection. It is used to prevent the output from being switched off immediately when the room is briefly left and from being switched on again when the user returns to the room. The follow-up time can be set from 00:00:10 to 18:12:15.		
Brightness setpoint	2Lux ...1000Lux	500
This parameter is used to set the setpoint for brightness control.		
Automatic start value	Yes No	Yes
Yes: The sensor automatically determines the start value after an artificial light adjustment. No: The sensor always starts with the preset start value.		
Start value Dimming level	1% ... 100%	80
This parameter defines the switch-on value when constant lighting control is started.		
Lighting with sufficient daylight	switch off dimming to minimum dimming value	switch off
This parameter is used to set whether the lighting should be switched off completely when constant light control is active and sufficient daylight is available, or whether it should remain switched on dimmed to the adjustable "minimum dimming value". <u>switch it off:</u> The lighting is switched off if the dimming value remains dimmed to the minimum level for a certain time. If the follow-up time expires before that, the output switches off directly. <u>dim to minimum dimming value:</u> The lighting remains switched on and dimmed to the "minimum dimming value", even if the dimming value determined by the light-level controller is below the set "minimum dimming value". It is only dimmed brighter again when the dimming value determined by the brightness controller is above the set "minimum dimming value".		
minimum dimming value	0,5%; 1%; 2%; 3%; 4%; 5%; 6%; 7%; 8%; 9%; 10%	0,5%
If the brightness controller determines a dimming value that is below the value set here, the lighting remains dimmed to the minimum dimming value.		
Basic lighting Dimming value (only with basic lighting: basic lighting active and basic lighting: Basic lighting ON time-limited, depending on brightness and always)	1%...100%	10
This parameter is used to set the dimming value to which the basic lighting is switched on.		
Basic lighting Duty cycle	hh:mm:ss	00:15:00
constant light control		
name	settings	factory setting

(only with basic lighting: basic lighting active and basic lighting: basic lighting ON time-limited)		
The basic lighting is switched off after the set duty cycle has elapsed. The maximum duty cycle is 18:12:15.		
basic lighting threshold (only with basic lighting: basic lighting active and basic lighting: basic lighting ON depending on brightness)	2Lux ...1000Lux	50
This parameter is used to set the threshold value below which the basic illumination is activated and significantly exceeded and deactivated again. This occurs regardless of whether persons are within the detection range or not.		
blocks		
Disable output	No Disable with ON / Enable with OFF Disable with OFF / Enable with ON	No
This parameter is used to set whether the output can be disabled and with which telegram the output is disabled and enabled again. <u>No</u> : The output cannot be disabled. <u>Disable with ON / Enable with OFF</u> : The output is disabled by a telegram with the value "1" to the disable object and enabled by a telegram "0". <u>Disable with OFF / Enable with ON</u> : The output is disabled by a telegram with the value "0" to the disable object and enabled by a telegram "1".		
Behaviour with locks	no action ON OFF	no action
This parameter is used to set whether the output is to be switched on or off before locking or whether the output remains unchanged. <u>no action</u> : No further action takes place before locking. <u>ON</u> : Before locking, the output is switched on. <u>OFF</u> : Before locking, the output is switched off.		
Behaviour on release	Continue regulation ON OFF	Continue regulation
This parameter is used to set whether the output resumes its activity after release or whether the output is switched on or off first. <u>Continue regulation</u> : The output is immediately in normal operation and sets the output depending on the configuration. <u>ON</u> : After release, the output is switched on. After a waiting period of 5 seconds, normal operation is reactivated. <u>OFF</u> : After release, the output is switched on. After a waiting period of 5 seconds, normal operation is reactivated.		

10.5 presence output

presence output		
name	settings	factory setting
Switch-on delay (in seconds)	0s...10s	1
A movement must be detected over the total time of the switch-on delay. Only then does the output switch ON.		
follow-up time	hh:mm:ss	00:00:30
The follow-up time is not started if there is no presence detection. It is used to prevent the output from being switched off immediately when the room is briefly left and from being switched on again when the user returns to the room.		

presence output		
name	settings	factory setting
The follow-up time can be set from 00:00:00 to 18:12:15.		
Send status cyclically	Do not send status cyclically ON/OFF ON OFF	ON
<p>This parameter is used to set whether the output is to be sent cyclically not only after each change but also after each change and at which status.</p> <p><u>Do not send status cyclically</u>: No status is sent cyclically. <u>ON/OFF</u>: The status ON and OFF is sent cyclically <u>ON</u>: Only the status ON is sent cyclically.</p> <p><u>OFF</u>: Only the OFF status is sent cyclically.</p>		
Send cyclically Interval	hh:mm:ss	00:00:30
Time interval for cyclic transmission.		
Disable output	No Disable with ON / Enable with OFF Disable with OFF / Enable with ON	No
<p>This parameter is used to set whether the output can be disabled and with which telegram the output is disabled and enabled again. <u>No</u>: The output cannot be disabled.</p> <p><u>Disable with ON / Enable with OFF</u>: The output is sent by a telegram with the value "1" to the Disable object disabled and enabled by telegram "0".</p> <p><u>Disable with OFF / Enable with ON</u>: The output is disabled by a telegram with the value "0" to the disable object and enabled by a telegram "1".</p>		
Behaviour with locks	no action ON OFF	no action
<p>This parameter is used to set whether the output is to be switched on or off before locking or whether the output remains unchanged. <u>no action</u>: No further action takes place before locking.</p> <p><u>ON</u>: Before locking, the output is switched on.</p> <p><u>OFF</u>: Before locking, the output is switched off.</p>		
Behaviour on release	Continue regulation ON OFF	Continue regulation
<p>This parameter is used to set whether the output resumes its activity after release or whether the output is switched on or off first.</p> <p><u>Continue regulation</u>: The output is immediately in normal operation and sets the output depending on the configuration.</p> <p><u>ON</u>: After release, the output is switched on. After a waiting period of 5 seconds, normal operation is reactivated.</p> <p><u>OFF</u>: After release, the output is switched on. After a waiting period of 5 seconds, normal operation is reactivated.</p>		

10.6 outgoing absence

outgoing absence		
name	settings	factory setting
Switch-on delay (in seconds)	1...10	1
No movement shall be detected over the total time of the switch-on delay. Only then does the output switch ON.		
follow-up time	hh:mm:ss	00:00:30

<p>The follow-up time is not started if there is no absence detection. It is used to prevent the output from being switched off immediately when the room is only briefly left and from being switched on again when the user returns to the room. The follow-up time can be set from 00:00:01 to 18:12:15.</p>		
Send status cyclically	Do not send status cyclically ON/OFF	ON
outgoing absence		
name	settings	factory setting
	ON OFF	
<p>This parameter is used to set whether the output is to be sent cyclically not only after each change but also after each change and at which status. <u>Do not send status cyclically</u>: No status is sent cyclically. <u>ON/OFF</u>: The status ON and OFF is sent cyclically <u>ON</u>: Only the status ON is sent cyclically. <u>OFF</u>: Only the OFF status is sent cyclically.</p>		
Send cyclically Interval	hh:mm:ss	00:00:30
Time interval for cyclic transmission.		
Disable output	No Disable with ON / Enable with OFF Disable with OFF / Enable with ON	No
<p>This parameter is used to set whether the output can be disabled and with which telegram the output can be disabled and enabled again. <u>No</u>: The output cannot be disabled. <u>Disable with ON / Enable with OFF</u>: The output is disabled by a telegram with the value "1" to the disable object and enabled by a telegram "0". <u>Disable with OFF / Enable with ON</u>: The output is disabled by a telegram with the value "0" to the disable object and enabled by a telegram "1".</p>		
Behaviour with locks	no action ON OFF	no action
<p>This parameter is used to set whether the output is to be switched on or off before locking or whether the output is to remain unchanged. <u>no action</u>: No further action is performed before locking. <u>ON</u>: Before locking, the output is switched on. <u>OFF</u>: Before locking, the output is switched off.</p>		
Behaviour on release	Continue regulation ON OFF	Continue regulation
<p>This parameter is used to set whether the output resumes its activity after release or whether the output is switched on or off first. <u>Continue regulation</u>: The output is immediately in normal operation and sets the output depending on the configuration. <u>ON</u>: After release, the output is switched on. After a waiting period of 5 seconds, normal operation is reactivated. <u>OFF</u>: After release, the output is switched on. After a waiting period of 5 seconds, normal operation is reactivated.</p>		

10.7 HVAC output

HVAC output		
name	settings	factory setting
Type Output object	bit byte	bit
This parameter is used to select whether the output object has the type bit or byte.		
Mode ON	car comfort standby economy building protection	car
This parameter is used to select which byte signal is sent to the controller during presence.		

OFF mode	car	standby
	comfort	
	standby	
	economy	
	building protection	
This parameter is used to select which byte signal is sent to the controller in case of absence.		
Switch-on delay (only presence-dependent)	hh:mm:ss	00:05:00
HVAC output		
name	settings	factory setting
A movement must be detected over the total time of the switch-on delay. Only then does the output switch ON. The maximum switch-on delay is 18:12:15.		
follow-up time (only presence-dependent)	hh:mm:ss	00:15:00
The follow-up time is not started if there is no presence detection. It is used to prevent the output from being switched off immediately when the room is only briefly left and from being switched on again when the user returns to the room. The follow-up time can be set from 00:00:10 to 18:12:15.		
Slave input	inactive ON ON/OFF	ON
This parameter determines whether the slave input expects an ON telegram or an ON and OFF telegram.		
Disable output	No	No
	Disable with ON / Enable with OFF	
	Disable with OFF / Enable with ON	
This parameter is used to set whether the output can be disabled and with which telegram the output can be disabled and enabled again. No : The output cannot be disabled. Disable with ON / Enable with OFF : The output is disabled by a telegram with the value "1" to the disable object and enabled by a telegram "0". Disable with OFF / Enable with ON : The output is disabled by a telegram with the value "0" to the disable object and enabled by a telegram "1".		
Behaviour with locks	no action no action ON OFF	
This parameter is used to set whether the output is to be switched on or off before locking or whether the output is to remain unchanged. no action : No further action is performed before locking. ON : Before locking, the output is switched on. OFF : Before locking, the output is switched off.		
Behaviour on release	Continue regulation ON OFF	Continue regulation
This parameter is used to set whether the output resumes its activity after release or whether the output is switched on or off first. Continue regulation : The output is immediately in normal operation and sets the output depending on the configuration. ON : After release, the output is switched on. After a waiting period of 5 seconds, normal operation is reactivated. OFF : After release, the output is switched on. After a waiting period of 5 seconds, normal operation is reactivated.		
Slave input	inactive ON ON/OFF	ON
This parameter determines whether the slave input expects an ON telegram or an ON and OFF telegram.		

10.8 Twilight switch output

Twilight switch output		
name	settings	factory setting
twilight threshold	2 Lux .. 1000 Lux	50 Lux
This parameter is used to set the brightness at which the twilight switch switches on the output.		
Disable output	No	No
	Disable with ON / Enable with OFF	
	Disable with OFF / Enable with ON	
This parameter is used to set whether the output can be disabled and with which telegram the output is disabled and enabled again. <u>No</u> : The output cannot be disabled. <u>Disable with ON / Enable with OFF</u> : The output is sent by a telegram with the value "1" to the		
Disable object disabled and enabled by telegram "0". <u>Disable with OFF / Enable with ON</u> : The output is disabled by a telegram with the value "0" to the disable object and enabled by a telegram "1".		
Behaviour with locks	no action ON OFF	no action
This parameter is used to set whether the output is to be switched on or off before locking or whether the output remains unchanged. <u>no action</u> : No further action takes place before locking. <u>ON</u> : Before locking, the output is switched on. <u>OFF</u> : Before locking, the output is switched off.		
Behaviour on release	Continue regulation ON OFF	Continue regulation
This parameter is used to set whether the output resumes its activity after release or whether the output is switched on or off first. <u>Continue regulation</u> : The output is immediately in normal operation and sets the output depending on the configuration. <u>ON</u> : After release, the output is switched on. After a waiting period of 5 seconds, normal operation is reactivated. <u>AUS</u> : Nach dem Freigeben wird der Ausgang eingeschaltet. Nach einer Wartezeit von 5 Sekunden wird der Normalbetrieb wieder aktiviert.		

10.9 brightness output

brightness output		
name	settings	factory setting
Messwert senden bei	Änderung	Änderung
	Zyklisch	
Mit diesem Parameter wird eingestellt, ob die Messwerte nur bei einer Änderung oder zyklisch auf den Bus gesendet werden.		
Min. Helligkeitsänderung	1 Lux .. 255 Lux	30 Lux
Mit diesem Parameter wird eingestellt, um welchen Wert sich der zuletzt gesendete Messwert mindestens geändert haben muss, damit der Messwert erneut gesendet wird.		
Messwert zyklisch senden	hh:mm:ss	00:00:30
Zeitintervall mit dem zyklisch alle Helligkeits-Messwerte gesendet werden. Das zyklische Senden ist von 00:00:10 bis 18:12:15 einstellbar.		

10.10 sabotage

Sabotage Ausgang		
name	settings	factory setting
Send cyclically Interval	hh:mm:ss	00:01:00
Zeitintervall mit dem zyklisch das Sabotage-Telegramm als Heartbeat gesendet wird. Das zyklische Senden ist von 00:00:10 bis 18:12:15 einstellbar.		

Telegramm	ON	ON
	OFF	
Dieser Parameter definiert, ob zyklisch ein EIN-Telegramm oder AUS-Telegramm gesendet wird.		

10.11 Logikgatter 1...2 (alle identisch)

Logikgatter (1...2)		
name	settings	factory setting
logic gate Art der Verknüpfung	ODER; UND; Exklusiv-ODER	ODER
Mit diesem Parameter wird festgelegt, welche logische Verknüpfung das Gatter durchläuft.		
Logikgatter (1...2)		
name	settings	factory setting
logic gate Anzahl der Eingänge	1 ... 4	2
Mit diesem Parameter wird festgelegt, wie viele Eingänge das Gatter besitzt.		
logic gate Typ Ausgangsobjekt	ON/OFF	ON/OFF
	Wert	
Dieser Parameter stellt die Art des Ausgangs ein.		
logic gate Schaltbefehl bei logischer 0	EIN; AUS	OFF
Mit diesem Parameter wird konfiguriert, welcher Schaltbefehl bei einer logischen „0“ gesendet wird.		
logic gate Schaltbefehl bei logischer 1	EIN; AUS	ON
Mit diesem Parameter wird konfiguriert, welcher Schaltbefehl bei einer logischen „1“ gesendet wird.		
logic gate Wert bei logischer 0	0 ... 255	0
Mit diesem Parameter wird konfiguriert, welcher Wert bei einer logischen „0“ gesendet wird.		
logic gate Wert bei logischer 1	0 ... 255	255
Mit diesem Parameter wird konfiguriert, welcher Wert bei einer logischen „1“ gesendet wird.		
logic gate Sendeverhalten Ausgang	bei Änderung der Logik; bei Änderung der Logik auf 1; bei Änderung der Logik auf 0;	bei Änderung der Logik
Mit diesem Parameter wird das Sendeverhalten des Ausgangs eingestellt.		
Logikgatter Sperren	No	No
	Disable with ON / Enable with OFF	
	Disable with OFF / Enable with ON	
This parameter is used to set whether the output can be disabled and with which telegram the output is disabled and enabled again. <u>No</u> : The output cannot be disabled. <u>Disable with ON / Enable with OFF</u> : The output is disabled by a telegram with the value "1" to the disable object and enabled by a telegram "0". <u>Disable with OFF / Enable with ON</u> : The output is disabled by a telegram with the value "0" to the disable object and enabled by a telegram "1".		
logic gate Behaviour with locks	no action ON OFF	no action

This parameter is used to set whether the output is to be switched on or off before being disabled or whether the output remains unchanged.

No action: No further action takes place before the lock.

ON: Before locking, the output is switched on.

OFF: Before locking, the output is switched off.