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KNX Technical Reference Manual
Busch Präsenz tech

6131/10-500
6131/11-500

Power and productivity
for a better world™

KNX Technical Reference Manual
Busch Präsenz tech

1 Safety instructions

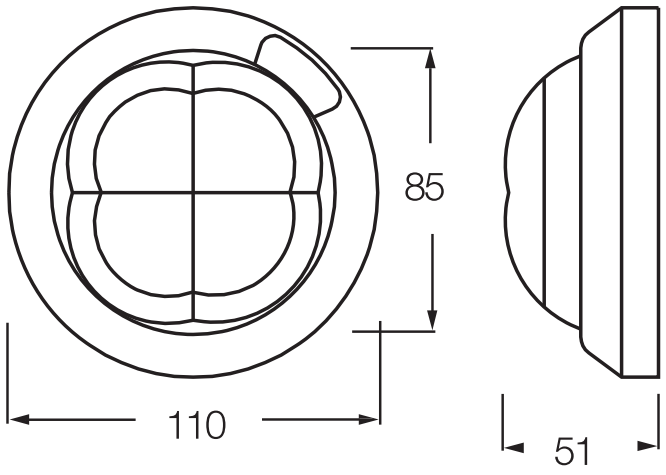
Work on the 230 V power supply system must only be performed by specialist staff.
Disconnect the mains power supply prior to mounting and/or disassembly!
Failure to observe the installation and operating instructions may result in fire or other hazards.

Disclaimer
The content of this printed material has been checked for compliance with hardware and software. However, no liability can be assumed for any deviations that may still occur. Any necessary corrections will be implemented in future versions of this manual.
Please advise us of any suggestions concerning the manual's improvement you may have.

The devices are designed for mounting on ceilings. They contain highly sensitive sensor/lens systems and have, depending on the application selected, various functions. The overall function of the devices also depends on the installation height.

The Busch-Watchdog® Präsenz tech is intended solely for indoor use, e.g. in offices, schools or private buildings. The devices, for example, serve for switching and regulating lighting and/or HKL (HVAC) systems in dependence of brightness and/or movement. Please note that the Presence detector is not suitable for use as an intrusion or attack alarm since it lacks the required safety against sabotage in accordance to the German VdS (Authority on Safety and Security).

2 Dimensional drawings



3 Technical data

Attribute	Value
Power supply	5 V, < 10 mA
Switch-on time after switch-off	approx. 1 second
Adjustable brightness range	approx. 5 to 1000 lux
Opening angle for brightness measurement	60°
Temperature range	-5 °C to 45 °C
Protection	IP 20
Product standard	EN 60669-2-1

4 Functions

The devices described here are presence detectors. The difference between movement detectors and presence detectors is the resolution of the segments. The detection segments of a presence detector are smaller due to the higher resolution and therefore also respond to the slightest movement of a person. In addition, with the function types of constant light switch and constant light controller these presence detectors continuously measure the brightness.

The Busch Präsenz tech is available in two versions:

The **Busch-Watchdog® Präsenz tech KNX (6131/10-500)** offers movement detection with 2 channels and constant light switching. Constant light switching adds light when persons move within the detection range and the daylight does not meet the required brightness level in the room. The Busch Präsenz tech detects the luminosity of the lamp used. As soon as the natural light is adequate, the connected light sources are deactivated.
The combination of these two functions results in two advantages:

- Energy is being saved since the lamps are deactivated as soon as the natural light has reached sufficient brightness.
- Additional energy is saved since the lights are only switched on when persons are inside the room.

The **Busch-Watchdog® Präsenz tech DualLINE KNX (6131/11-500)** can both switch lamps and also dim them. This makes constant light control much more precise and maintain the brightness level in the room at the desired level.
The integrated HVAC function makes it possible to control heating, ventilation and air-conditioning in the respective detection range when someone is present. This additionally saves energy. Two channels are available for this function.
Special comfort is made possible with the integration of the IR manual transmitter (6010/25-500). The Busch-Watchdog® Präsenz tech DualLINE KNX receives the signals and converts them on the bus.
The Busch-Watchdog® Präsenz tech DualLINE KNX additionally has numerous general functions, which are listed in the table on page 7. There you will also find a reference to additional explanations.

Both devices can be easily updated to the latest software version with the programming adapter. The various operating modes of the devices can automatically regulate the presence detector, or only when it has been activated via a control element for example.

Constant light

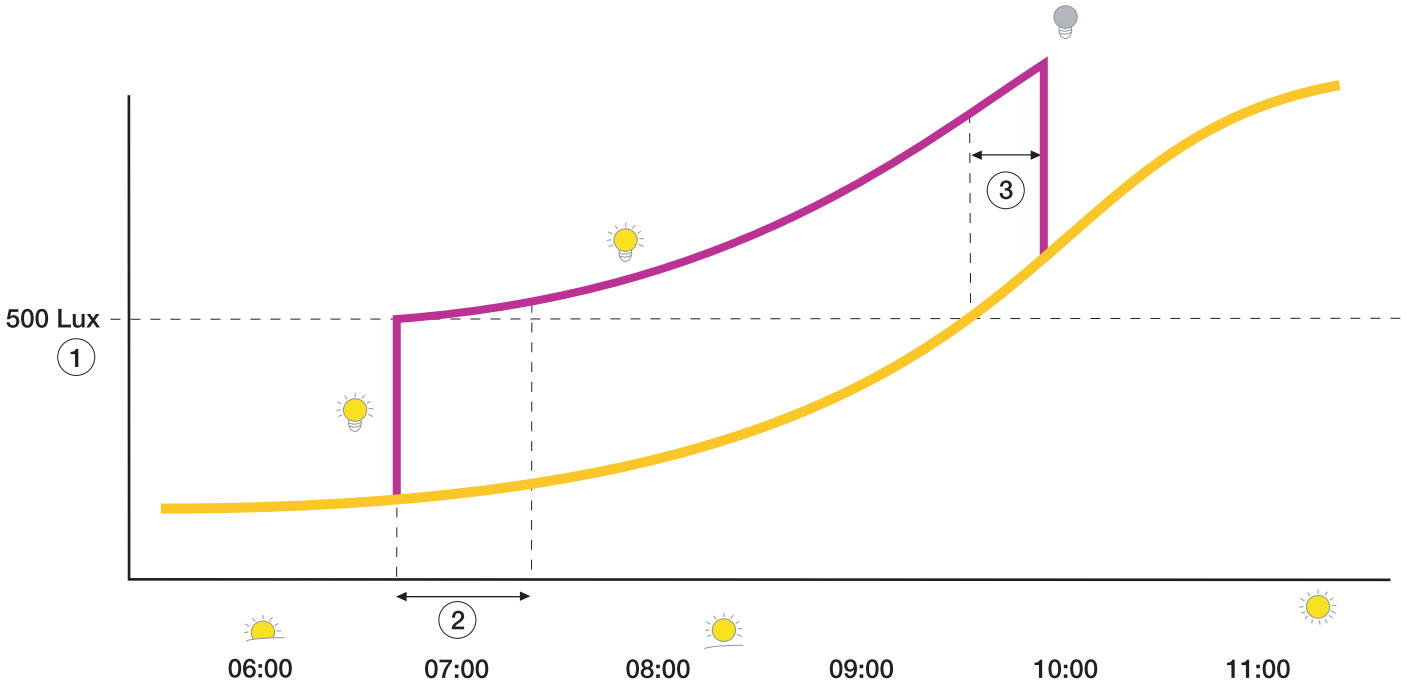
Depending on the version of the equipment, the Busch-Watchdog® Präsenz tech offers a variety of options to maintain the brightness in the room at a pleasant level. There is a difference between the functions of the constant light switch and the constant light controller. Both functions ensure that the brightness does not drop below a certain level when persons are in the room. The use of a presence detector is especially practical for work stations in an office, since even small movements are detected.

The constant light switch can switch lamps on and off. The constant light controller can additionally dim lights, to maintain a level that is as constant as possible. Both functions work in dependence of light conditions and movement in the detection range. The devices can operate either in "automatic" or "automatic time control" mode. If automatic time control is selected, for example, the light can be switched on manually via a touch sensor. The light remains on as long as movement is detected and daylight is not sufficient. If no movement is detected, the light-on time expires before an OFF telegram is sent via the output on the bus. In automatic mode the movement sensor also takes over the switch-on function as soon as someone enters the room.

Constant light switch

The constant light switch switches on lamps in the room as soon as movement by a person is detected and the desired brightness value is not attained by the entering daylight alone.

The programmed set value is maintained as long as people are in the detection range. The application detects when the entering daylight is sufficient. The lamps are then switched off again to save energy.



Control parameters:

1 Set value (lx)
2 Delay time after switch-on up to measurement of the artificial light component
3 Minimum time above the switch-off threshold (min)

To set up the constant light-switch function the ETS plug-in Power-Tool is required. Here are several parameters are found again with certain dependencies. These dependencies are displayed with the diagram.
A light-on time can be set. This time expires when the presence detector no longer senses movement. After expiry, an OFF telegram is sent on the output. Connected lamps are switched off. The light-on time should always be higher than the "delay after switch-on up to measurement of the artificial light component" (2). In the worst case the light sensor would measure the artificial light component when the lamps are switched off.
This should be avoided since the entire constant light switching function is based on this value.
The "delay after switch-on up to measurement of the artificial light component" (2) is to be used especially with lamps that take a few seconds to reach their full brightness. Fluorescent lamps require up to 250 seconds, whereas incandescent lamps reach their full brightness almost immediately.
The "minimum time above the switch-off threshold" (3) ensures that the natural light component attains a stable value before the artificial light is switched off. If this time is too short, this could lead to an unwanted activation and deactivation of the lamps in the room.

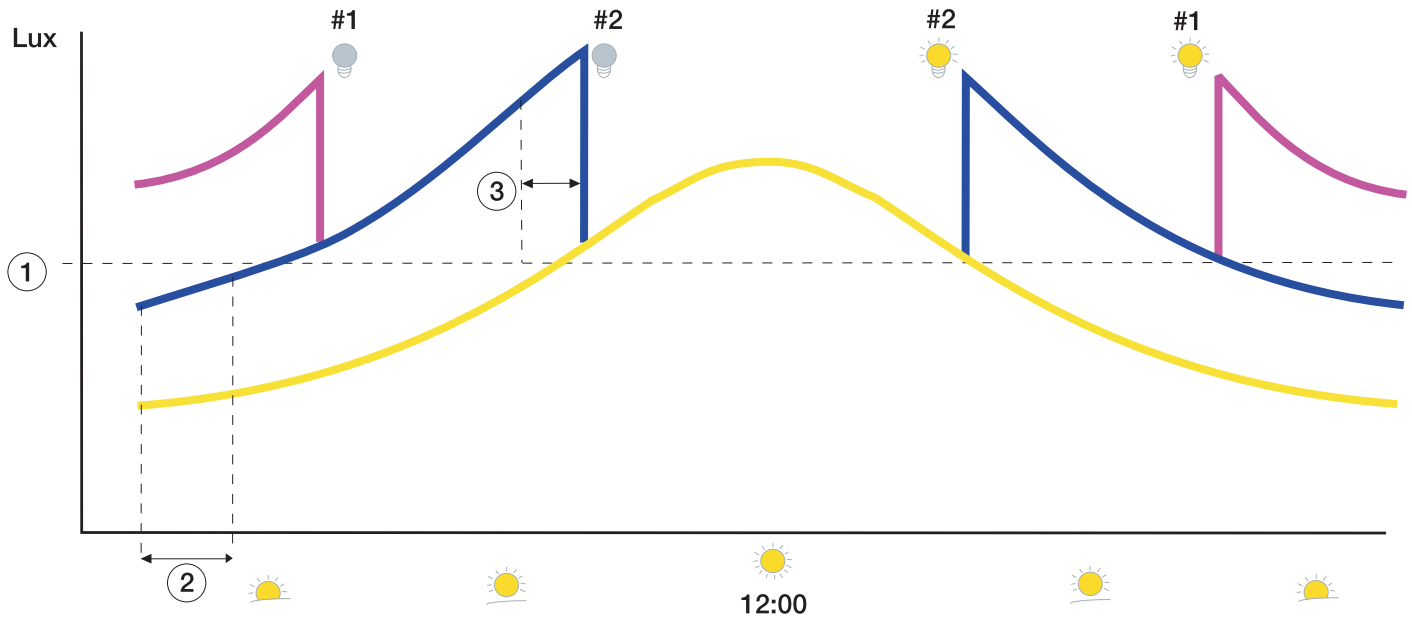


Fig. 1: Constant light switching with two light rows

Control parameters:

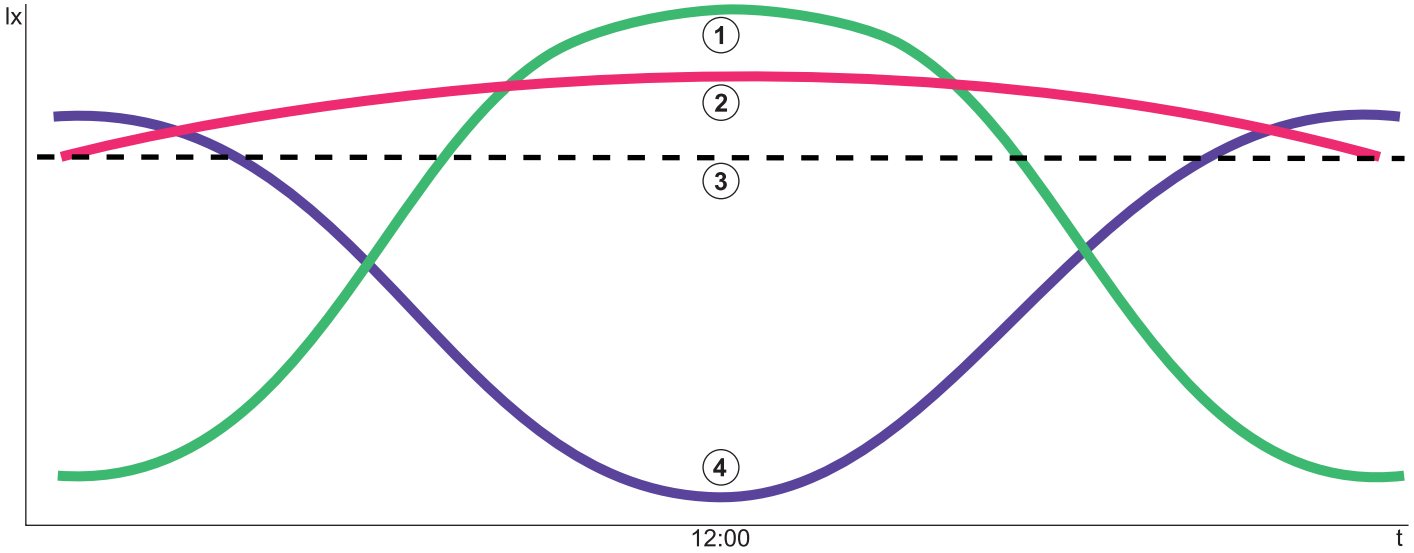
1 Set value (lx)
2 Delay time after switch-on up to measurement of the artificial light component
3 Minimum time above the switch-off threshold (min)

Please observe the instructions for connecting the lamps in Chapter 9.4 “Automatic time control, constant light controller for two light rows“ on page 16.

Constant light controller

Both the constant light controller and the constant light switch ensure that the level of brightness in the room does not drop below the desired level. However, the brightness controller is additionally able to send telegrams for dimming lamps to the KNX bus. This enables a constant level to be attained due to the dimming of lights brighter and darker - always in dependence of the natural light. And the accuracy of the control increases with the operating time. The constant light controller remembers the luminosity of the lamps used. That is why the lamps used later must also be used during commissioning of the presence detector with the constant light control function.

Next to the brightness the constant light controller also responds to the presence of persons in the room.



1 Natural light | 2 Brightness in the room | 3 Programmed brightness threshold | 4 Artificial light

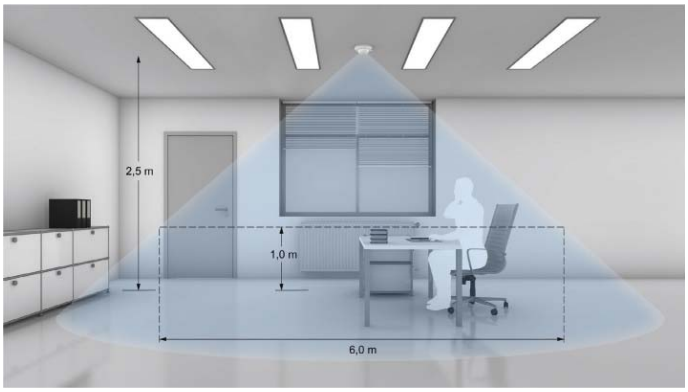
Note:

If output 2 is activated, constant light control continues on the set / stored value. Output 1 is the leading output. Due to the dependence and the factor between output 1 and 2, the lamps can have different brightnesses / switching states; for example, the lamps in the rear section of the room (output 1) are brighter than the lamps installed closer to the window (output).

Functions	6131/10-500	6131/11-500	Page
Movement detection	●	●	See page 20
Heating, air conditioning, ventilation		●	See page 22
IR reception		●	
Constant light control		●	See page 23
Constant light switching	●	●	See page 25
Brightness detection		●	See page 27
Updatability	●	●	
General functions			
Delay		●	See page 28
Staircase lighting		●	See page 29
Light scene actuator		●	See page 30
Sequence		●	See page 30
Preset		●	See page 31
Send cyclical telegram		●	See page 31
Flashing		●	See page 32
Logic		●	See page 32
Gate		●	See page 33
Min/max value transducer		●	See page 34
Threshold value / hysteresis		●	See page 35
PWM inverter		●	See page 36
Priority		●	See page 37

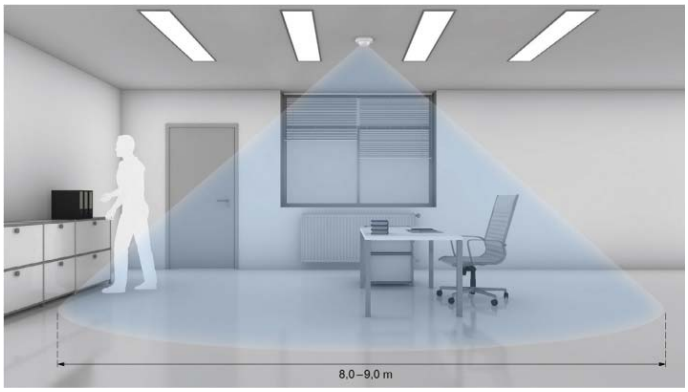
5 Detection range

The detection range of the KNX presence detector depends on the movement of persons and the mounting height in the room. The movement sensor detects the smallest of movements, e.g. at PC work stations, at desks, etc. Here it must be distinguished between the inner and outer detection range and the mounting height of the presence detector.



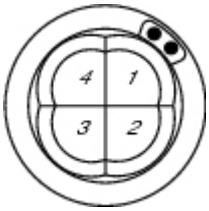
Inner detection range (seated persons)

Seated persons must be completely within the detection range. The shorter the distance between the person to be detected and the presence detector, the smaller the movement can be that is still detected. The reference level for the detection of seated activities is approx. 1 m. At this height, the detection range is 6 m in diameter (mounting height of the presence detector = 2.5 m). At a higher mounting height, the detection range becomes larger, but the detection density smaller.



Outer detection range (walking persons)

For the detection of walking persons, a larger detection range is available. The reference level for detection is the floor. A mounting height of 2.5 m results in a diameter of approx. 8 m for the detection range.



Limited detection

The detection range of the presence detector can be restricted. The device does not need to be covered mechanically for this. Individual sectors can be deactivated in the application.

Mounting height	Seated persons*	Walking persons*
2.0 m	4 m	6 m
2.5 m	6 m	8 m
3.0 m	8 m	10 m
3.5 m	10 m	12 m
4.0 m	12 m**	14 m
5.0 m	16 m**	18 m

* Seat height: 1 m
** Not suitable for "pure desk work" or switch-off delay > 15 minutes

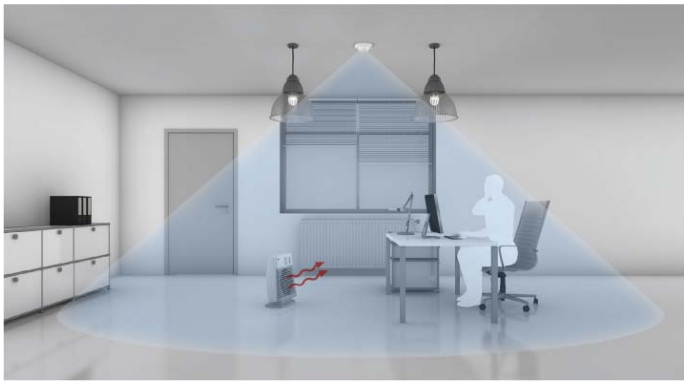
6 Sources of interference

Switching is triggered by movement. If a foreign heat source is in close proximity, this can cause false triggering. Here a distinction must be made between foreign heat sources and limited visibility as a source of interference.

Limited visibility of the Busch-Watchdog® Präsenz tech

The detection range of the Busch-Watchdog® can be obstructed by various objects, e.g.:

- Lamp rows that are mounted lower than the presence detector
- Large plants
- Partitions
- Glass panes



Foreign heat sources

Rapid changes in temperature surrounding the presence detector can also trigger unwanted switching, e.g.:

- Additional fan
- Switching on/off of lamps in the direct vicinity (< 1.5 m) of the presence detector, in particular incandescent lamps and halogen lamps

Moving machines, suspended posters etc.

Heat sources without interference effect

If the temperature changes only slowly, this will not affect the switching behaviour of the presence detector, e.g.:

- Radiators (distance > 1.5 m)
- Surfaces heated by the sun
- EDP systems (computers, printers, monitors)
- Ventilation systems, when warm air does not flow directly into the detection range of the presence detector

7 Remote control

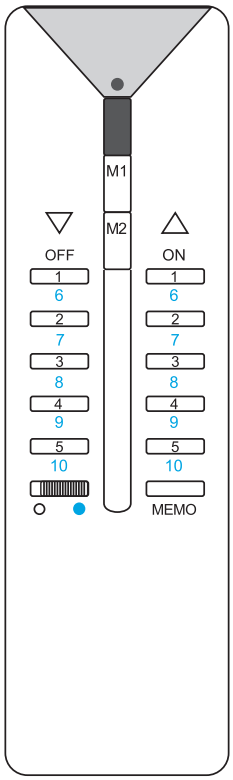
The DualLINE presence detector has a sensor for receiving infrared signals. This allows the IR manual transmitter 6110/25-500 to be used, for example. Two channels that can be selected on the transmitter are available for operation. The blue and the white channel.

The following example is to serve as an aid for commissioning.
The infrared functions can be programmed in the presence detector. For button M1 (blue and / or white) the function "Switching, rocker switch left / right" is selected. The parameter "Reaction to rising edge" is shown within this function. This parameter is to be set on "ON". The function has the communication object "Switching".
This object must now be connected with the object "Save set value" of the constant light application. This stores the current light value as set value as soon as button M1 is pressed.
The light can, for example, be set with the manual transmitter. For this, one or several button pairs are occupied with the function "Dimming rocker switch total" and connected directly with the dimming actuator.

Now use the button pair selected to set the desired brightness and save the value with button M1.

RC 5 Code

Channel 29 (white)	Designation	Command no. (decimal)
1	ON / BRIGHT	57
1	OFF / DARK	58
2	ON / BRIGHT	61
2	OFF / DARK	62
3	ON / BRIGHT	59
3	OFF / DARK	60
4	ON / BRIGHT	49
4	OFF / DARK	50
5	ON / BRIGHT	53
5	OFF / DARK	54
M1		51
M2		52
M3		48
M4		55
(Red)		63
MEMO		56



Channel 30 (blue)	Designation	Command no. (decimal)
1	ON / BRIGHT	57
1	OFF / DARK	58
2	ON / BRIGHT	61
2	OFF / DARK	62
3	ON / BRIGHT	59
3	OFF / DARK	60
4	ON / BRIGHT	49
4	OFF / DARK	50
5	ON / BRIGHT	53
5	OFF / DARK	54
M1		51
M2		52
M3		48
M4		55
(Red)		63
MEMO		56

8 Commissioning

To commission the presence detector with a constant light function you have various parameters available in Power-Tool. These parameters allow numerous options for setting, in order to adapt the working mode of the device to individual requirements and circumstances.
Therefore, the type of furniture, floor coverings or sources of interference in the room is of significance. The value to be set in a room with dark furniture will be less than in a room with a light-coloured floor and light-coloured furniture. Also the effect of the size of the interference, such as heat sources or short-term changes in brightness, such as passing clouds, can be taken into consideration.

Set value

Please note that the lux value to be set in the parameters does not correspond to the value required at the height of the desk. The light sensor is installed on the ceiling and can only measure the luminosity that is reflected from the opposite surfaces. The set value to be entered is therefore lower than the light value at the height of the work station.

Dim the lights to the desired intensity. Then save the measured light value via the memory object of the presence detector. The stored value can also be read via the object for the set value.

Outputs

The presence detector can also regulate two independent light circuits per channel via the two outputs.
The value of output 2 results from the value of output 1 and the respective proportionality factor. If the required set value is not reached, control continues beyond the factor.

Example:
An office is fitted with two light rows. Output 1 controls the light row in the darker part of the room.
Light row 2 in the front window area is connected to output 2. For the maximum brightness during the day a proportional factor of 70% is sufficient for output 2. During the night the full brightness in the room is not sufficient from output 1 and output 2. Output 2 would now control beyond the proportional factor until the set value or the full brightness of the lamp has been reached.

Light-on time

The presence detector will switch off or dim the lamps in the room if no movement is detected. A light-on time can be set to prevent the lamp from being switched off immediately. This time expires as soon as movement is no longer detected. It will always start again from the beginning.

Hysteresis

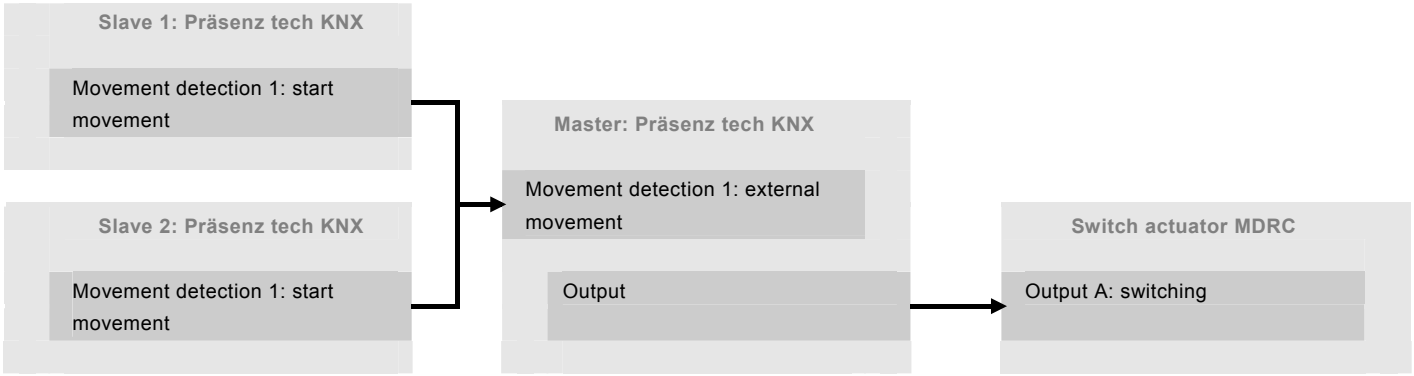
The hysteresis is a percentage value (+/-) that is related to the set value in lux. The hysteresis is a tolerance for maintaining the set value. The preset value is sufficient for most applications.

9 Examples for application

9.1 Movement detection with one master and two slaves

- 1 x Master
- 2 x Slave
- Movement detection
- Slave transmits cyclic to the master
- Master switches actuator

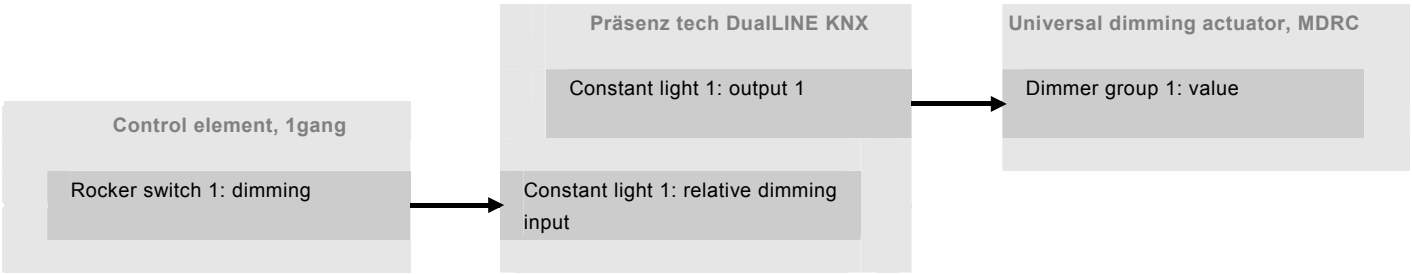
A room has 3 presence detectors installed for movement-dependent switching. One of the three devices is specified as master and the other two operate as slave. The slave device transmits the ON telegram cyclically during movement, and no telegram if there is no movement. If no movement is detected in any of the detection ranges, the master device transmits an OFF telegram to the actuator after the light-on time has expired.



9.2 Manual intervention

– Manual activation
– Set value is being met
- Deactivation with light-on time

If the user changes the room brightness via the control element at the door, the control is deactivated. The control can only be reactivated manually via the ON activation command of the control element. Movement detection remains active also when the constant light control is deactivated. The dimming function must be implemented via the object of the presence detector.

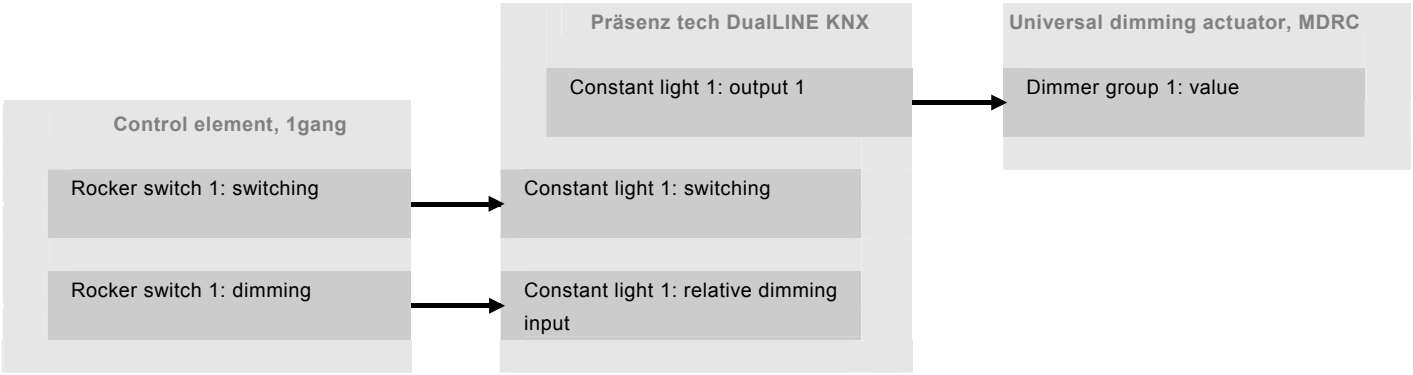


9.3 Automatic time control

- Manual deactivation
- Set value is being met
- Deactivation with light-on time

The room contains a movement-dependent and brightness-dependent presence detector. The device is activated via a separate control element. The presence detector adjusts the lighting as long as movement is detected. If no movement is detected, the light-on time expires and the light is switched off.

If the user changes the room brightness via the control element at the door, the control is deactivated. The control can only be reactivated manually via the ON activation command of the control element. Movement detection remains active also when the constant light control is deactivated.

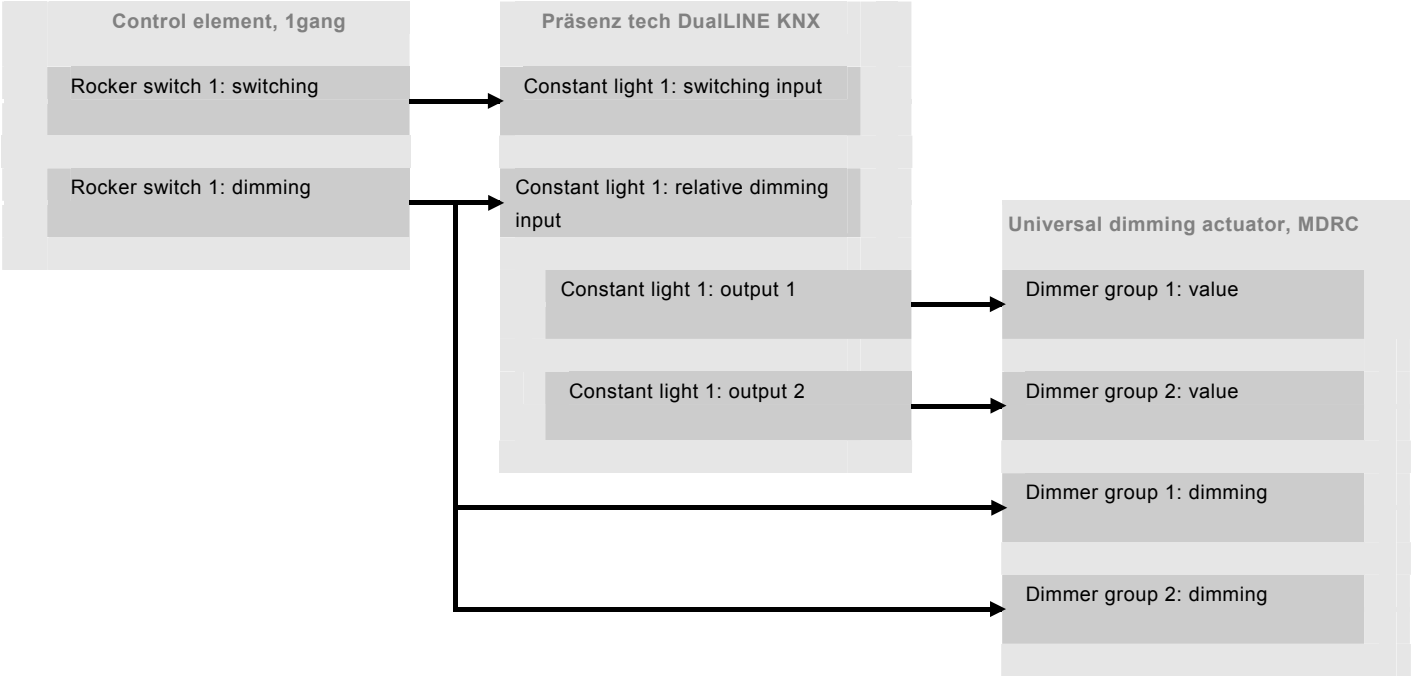


9.4 Automatic time control, constant light controller for two light rows

– Proportionality factor

An office has two light rows. Light row 1 in the rear area of the office is connected to output 1. The light row in the window area is connected to output 2. For the maximum brightness during the day a proportionality factor of 70% is sufficient for output 2. This means that the value at output 2 corresponds to the value of output 1.

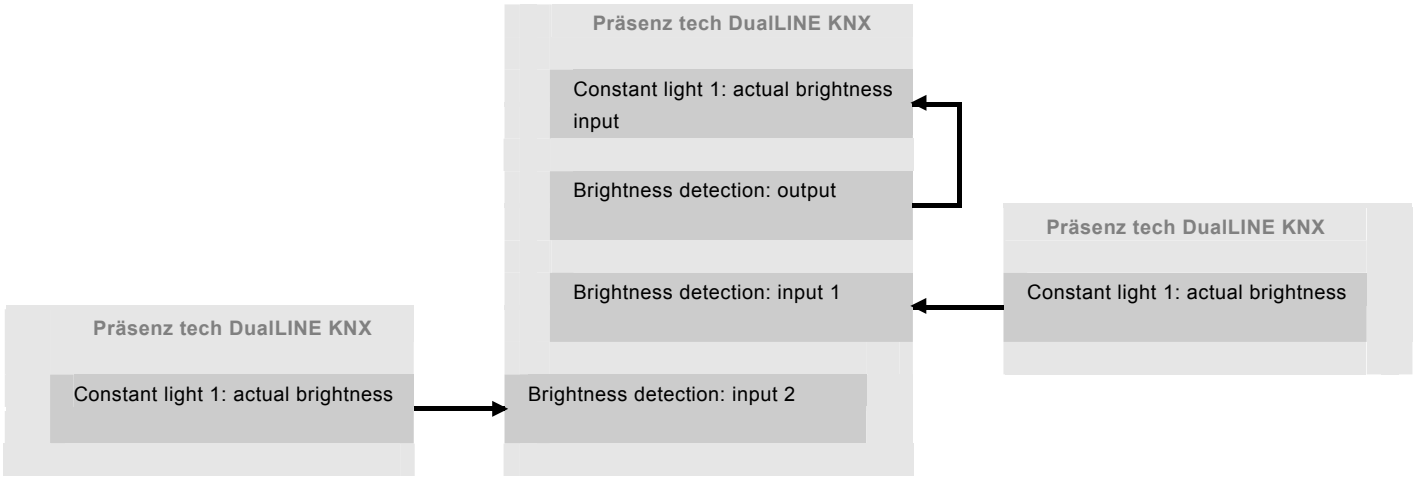
During the night this brightness in the room is not sufficient. Output 2 would now control beyond the proportionality factor until the set value or the full brightness of the lamp has been reached. The proportionality factor can also be set up for output 2 and always relates to output 1. The factor can only receive a maximum value of 100%. That is why it should be ensured that output 2 regulates the lamp in the brighter part of a room.



9.5 External brightness detection

- 3 channels for brightness detection
- Weighting

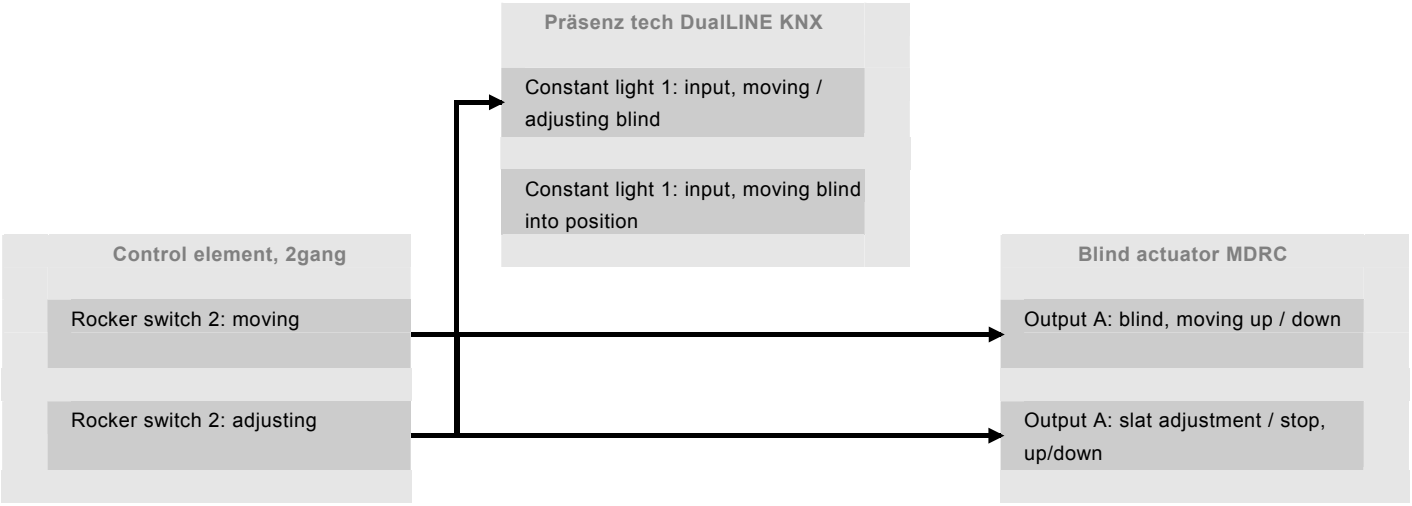
Depending on the spatial circumstances the accuracy of brightness detection is increased with additional sensors. Aside from the inherent brightness sensor of the Busch-Watchdog®, two inputs for external sensors are available. This allows additional Busch-Watchdog® Präsenz tech DualLINE devices to be used. The values received are weighted by the device.



9.6 Blind function

– Manual deactivation
– Set value is being met
- Deactivation with light-on time

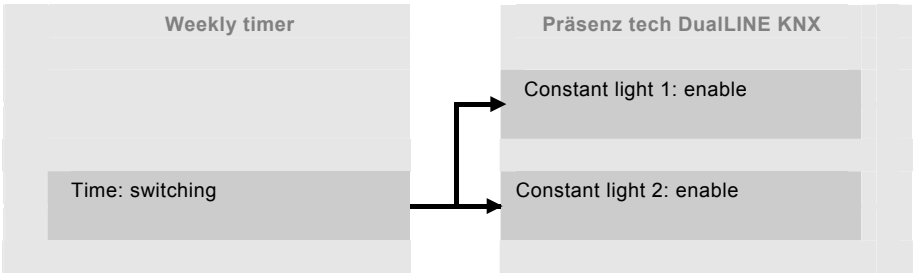
The blind on the window can be moved via the second rocker switch of the control element. Here the control should adjust quickly to the programmed brightness value when the blind moves up or down. After a programmed time the control changes from blind operation back to standard control operation.



9.7 Day / night switchover

– Switchover via enable

In this example the control of the light in the room during the day is to be different than at night. A day / night switchover is to be set up. One channel each of the constant light control is required for control during the day and the night. These are switched over with the aid of the enable object. The switchover can be made via a button command or from a clock. Either the channel with control for the day is active, or it is blocked and the channel for control in the night is active.



10 Description of application

10.1 Movement detector

The movement detector application can trigger telegrams on the bus when a movement is detected in the detection zone. Telegrams can also be sent on the bus when telegrams are received on the 1-bit communication object "External pushbutton input". This means that a unit can be activated by additional KNX devices as if a movement was detected. The time for sending out a telegram depends especially on the operating mode that has been set. The movement detector can operate in the following modes: "Signaling", "Automatic time control", "Semi-automatic" or "Automatic".

In the "Signaling" mode the movement detector is in the position to send telegrams cyclically on the "Start movement" 1-bit communication object.

In the "Automatic time control" mode the movement detector must be activated manually via the receipt of an ON telegram on the "External pushbutton input" object. The device switches off after the specified light-on time beginning from the most recent detection or manually.

In the "Semi-automatic" mode the movement detector switches on automatically when detecting a movement. It switches off at the receipt of an OFF telegram on the "External pushbutton input" object.
The movement detector switches off automatically after 6 hours.

In the "Automatic" mode the movement detector switches on automatically when detecting a movement. It switches off after the specified light-on time beginning from the most recent detection or through the receipt of an OFF telegram on the "External pushbutton input" object. When switching off manually the detection of movement is suppressed for the parameterised pause time via the internal sensor.

The movement detector can be activated permanently via the "Switchover of external pushbutton input" 1-bit communication object. The function can, for example, be used during cleaning actions to cause all the movement detectors to activate themselves even when no movement was detected.

If a movement detector works in an operating mode with light-on time, this can be adjusted during operation via a separate communication object. This would allow different light-on times to be used for mornings and for evenings.

The behaviour can be adjusted so that no undefined state arises after a bus voltage failure and subsequent return of bus voltage.

The movement detector can be blocked via an enable object.

The movement detector can switch brightness-dependent or brightness-independent. The setting parameters can be used to adjust the threshold value of the light sensor. The brightness threshold can also be adjusted via communication objects via the bus.

Motion sensor objects

No.	Object name	Data type	Flags
0	Enable	1 Bit EIS1 / DPT 1.001	C, W, U
1	Light-on time	2 Byte / DPT 7.005	C, W, U
2	Extension unit input	1 Bit EIS1 / DPT 1.001	C, W, U
3	Actuator status input	1 Bit EIS1 / DPT 1.001	C, W, U
4	Independent detection of brightness	1 Bit EIS1 / DPT 1.001	C, W, U
5	External brightness	2 Byte EIS 5 / DPT 9.004	C, W, U
6	External brightness threshold	2 Byte EIS 5 / DPT 9.004	C, W, U
7	Internal brightness threshold	1 Byte EIS 5 / DPT 9.004	C, W, U
8	LED output	1 Bit EIS 1 / DPT 1.001	C, W, U
9	Motion switching	1 Bit EIS 1 / DPT 1.001	C, T
9	Motion switching	1 Byte EIS 5 / DPT 5.001	C, T
9	Motion switching	1 Byte EIS 6 / DPT 5.010	C, T
10	Motion starting	1 Byte EIS 1 / DPT 1.001	C, T
11	Switchover of external pushbutton input	1 Bit EIS 1 / DPT 1.001	C, W, U
13	External pushbutton input	1 Bit EIS 1 / DPT 1.001	C, W, U

10.2 Heating, air-conditioning, ventilation

The HKL (HVAC) function serves as movement-dependent control of heating and/or cooling systems as well as ventilation systems within the range of the detector. Its function is not dependent on brightness. Short-term changes in movement in the detection range do not alter the switching state of the HKL (HVAC) function.

Objects heating - air-conditioning - ventilation

No.	Object name	Data type	Flags	Info
0	Output 1	1 bit DPT_switch) 1 Byte DPT_scaling 1 Byte DPT_Value_1_Ucount 2 Byte DPT_Value_2_Float 2 Byte DPT_Value_2_Ucount 2 Byte DPT_Value_2_Count 4 Byte DPT_Value_4_Float 4 Byte DPT_Value_4_Ucount 4 Byte DPT_Value_4_Count 4 Byte DPT_Value_4_Float	C, W, T	The movement-dependent control of heating and/or air-conditioning systems as well as ventilation systems in the range of the detector is implemented via the output. The output operates independent of brightness. Short-term changes in movement in the detection range do not alter the switching state of the HKL (HVAC) function.
0	Input, movement ext.	1 bit DPT_switch)	C, W	The HVAC function can be switched movement-dependent with a 1 by a different movement or presence detector via the object.
1	Enable	1 bit DPT_switch)	C, W, U	The function can be blocked or enabled via the object. The release has priority over all other objects.
1	Light-on time	2 Byte DPT_TimePeriodSec	C, W, U	If no movement is detected, the function enters the programmed light-on time and then switches off. The light-on time can be reprogrammed at all times via this object from a different control element without the aid of ETS. If this value is not to be overwritten during each download, the parameter "Overwrite setting during download" is to be set accordingly.
2	Force-position	1 bit DPT_switch)	C, W, U	By means of function force-position (1) the control function is deactivated and the device switches as parameterized until the force-position is deactivated (0). The force-position has a lower priority than enable.

10.3 Constant light controller

The "constant light controller" application allows dimming of brightness in a detection range specifically prepared for it. The controller can also be activated in dependence of movement. This, for example, allows a room to be maintained at a certain brightness level when someone is present.

Constant light controller objects

No.	Object name	Data type	Flags	Info
0	Output 1	8 Bit DPT_scaling 8 Bit DPT_Value_1_Ucount	C, W ,T ,U	The respective control value is sent to the actuator via the output. When output 2 is active, output 1 should activate the light row located in the darker area of the room.
0	Output 2	8 Bit DPT_scaling 8 Bit DPT_Value_1_Ucount	C, W ,T ,U	The respective control value is sent to the actuator via the output. When output 2 is active, it should activate the front, brighter area of the light row.
1	Switching the input	1 bit DPT_switch)	C, W, U	The control can be activated (automatic) or deactivated (manual) via the object. If the object is connected to a control element, the control is deactivated with a 1.
1	Relative dimming input	4 Bit DPT_control_dimming	C, W, U	The object can be connected to a control element. This makes it possible to dim the lights brighter / darker in the room. The constant light control is deactivated.
2	Value input	8 Bit DPT_Value_1_Ucount	C, W, U	The object can be connected to a value transmitter. This makes it possible to regulate the lighting in the room manually. The constant light control is deactivated.
2	Input, moving / adjusting the blind	1 Bit DPT_UpDown	C, W	The object is connected with the move command of the control element. When a value 1 or 0 is received, the parameters set under "control parameters for blind movement" become active. The application deactivates itself after a programmed time and changes back into the standard control algorithm.
2	Blind position input	8 Bit DPT_scaling	C, W	The object is connected with a 1-byte position command of the control element / actuator. When a value is received, the parameters set under "control parameters for blind movement" become active. The application deactivates itself after a programmed time and changes back into the standard control algorithm.
2	Input, movement ext.	1 bit DPT_switch)	C, W	The constant light control can be switched movement-dependent with a 1 from a different movement or presence detector via the object.
3	Brightness input ext.	2 Byte DPT_Value_2_Float	C, W	Via this object it is possible to link an external value from a different external brightness sensor with the constant light control. The internal brightness sensor is inactive for constant light control.

Constant light controller objects, continued

No.	Object name	Data type	Flags	Info
3	Enable	1 bit DPT_switch)	C, W, U	The constant light control can be blocked or enabled via the object. The release has priority over all other objects.
4	Light-on time	2 Byte DPT_TimePeriodSec	C, W, U	If no movement is detected, the function enters the programmed light-on time and then switches off. The light-on time can be reprogrammed at all times via this object from a different control element without the aid of ETS. If this new value is not to be overwritten during each download, the parameter "Overwrite setting during download" is to be set accordingly.
5	Set value	2 Byte DPT_Value_2_Float	C, R, W, T	This communication object can be used to specify values from outside. This value is used as the new set value. The current set value can be read via this communication object. Note: The value read out or to be entered here is smaller than the control value set in the room via the luxmeter. Example: The brightness at the top of the desk is to be 500 lx. The presence detector, however, measures the required brightness at the position it is mounted, e.g. on the ceiling. This means that there is a difference between the brightness at the desk and the ceiling. If this new value is not to be overwritten during each download, the parameter "Overwrite setting during download" is to be set accordingly.
5	Saving the set value	1 bit DPT_switch)	C, W	The desired brightness value is set with a control element via communication objects 'switch input', 'dim input' and/or 'input value'. If, for example, the luxmeter shows the value 500 lx, this brightness value with the description of 1 will be stored on this communication object as new set value of the control. Note: When setting the desired brightness, e.g. 500 lx, the lamp's light-up time is to be taken into account.
6	Actual brightness value	2 Byte DPT_Value_2_Float	C, R, W, T	The current (filtered) brightness value is made available via the "Actual brightness" communication object.

10.4 Constant light switch

The "constant light switch" application makes it possible to switch specific light rows on and off in dependence of the brightness in the room.
The controller can also be activated in dependence of movement.

Constant light switch objects

No.	Object name	Data type	Flags	Info
0	Output 1	1 bit DPT_switch) 1 Byte DPT_scaling 1 Byte DPT_Value_1_Ucount 2 Byte DPT_Value_2_Float 2 Byte DPT_Value_2_Ucount 2 Byte DPT_Value_2_Count 4 Byte DPT_Value_4_Float 4 Byte DPT_Value_4_Ucount 4 Byte DPT_Value_4_Count	C, W ,T ,U	The parameterized value is sent to the actuator via the output when the parameterized set value including the hysteresis is exceeded or falls short. When output 2 is active, output 1 should activate the light row located in the darker area of the room.
0	Output 2	1 bit DPT_switch) 1 Byte DPT_scaling 1 Byte DPT_Value_1_Ucount 2 Byte DPT_Value_2_Float 2 Byte DPT_Value_2_Ucount 2 Byte DPT_Value_2_Count 4 Byte DPT_Value_4_Float 4 Byte DPT_Value_4_Ucount 4 Byte DPT_Value_4_Count	C, W ,T ,U	The parameterized value is sent to the actuator via the output when the parameterized set value including the hysteresis is exceeded or falls short. When output 2 is active, output 1 should activate the light row located in the darker area of the room.
1	Switching the input	1 bit DPT_switch)	C, W, U	The control can be activated (automatic) or deactivated (manual) via the object. If the object is connected to a control element, the control is deactivated with a 1.
1	Relative dimming input	4 Bit DPT_control_dimming	C, W, U	The object can be connected to a control element. This makes it possible to dim the lights brighter / darker in the room. The constant light control is deactivated.
2	Value input	8 Bit DPT_Value_1_Ucount	C, W, U	The object can be connected to a value sender. This makes it possible to regulate the lighting in the room. The constant light control is deactivated.
2	Input, movement ext.	1 bit DPT_switch)	C, W	The constant light control can be switched movement-dependent with a 1 from a different movement or presence detector via the object.
3	Brightness input ext.	2 Byte DPT_Value_2_Float	C, W	Via this object it is possible to link an external value from a different brightness sensor with the constant light control.
3	Enable	1 bit DPT_switch)	C, W, U	The constant light control can be blocked or enabled via the object. The release has priority over all other objects.

Constant light switch objects, continued

No.	Object name	Data type	Flags	Info
4	Light-on time	2 Byte DPT_TimePeriodSec	C, W, U	If no movement is detected, the function enters the programmed light-on time and then switches off. The light-on time can be reprogrammed at all times via this object from a different control element without the aid of ETS. If this value is not to be overwritten during each download, the parameter "Overwrite setting during download" is to be set accordingly.
5	Set value	2 Byte DPT_Value_2_Float	C, R, W, T	This communication object can be used to specify values from outside. This value is used as the new set value. The current set value can be read via this communication object. Note: The value read out or to be entered here is smaller than the control value set in the room via the luxmeter. Example: The brightness at the top of the desk is to be 500 lx. The presence detector, however, measures the required brightness at the position it is mounted, e.g. on the ceiling. This means that there is a difference between the brightness at the desk and the ceiling.
5	Saving the set value	1 bit DPT_switch)	C, W	The desired brightness value is set with a control element via communication objects 'switch input', 'dim input' and/or 'input value'. If, for example, the luxmeter shows the value 500 lx, this brightness value with the description of 1 will be stored on this communication object as new set value of the control. Note: When setting the desired brightness, e.g. 500 lx, the lamp's light-up time is to be taken into account.
6	Actual brightness value	2 Byte DPT_Value_2_Float	C, R, W, T	The current (filtered) brightness value is made available via the "Actual brightness" communication object.

10.5 Brightness detection

The device has an internal brightness sensor. Up to two external brightness sensors can be connected for which the "brightness detection" function is available. This allows the individual sensors to be weighted before the averaged value is transmitted (e.g. to the constant light control). The inputs of the external brightness sensors can be monitored, to ensure that the device operates safely.

Brightness detection objects

No.	Object name	Data type	Flags	Info
0	Output	2 Byte DPT_Value_2_Float	C, T	If additional brightness sensors are to be positioned in the room and integrated into the constant light function aside from the internal brightness sensor of the presence detector, the current brightness values can be averaged via the "Brightness detection" function. The averaged value is then issued via the output object and connected with the "Brightness input ext." Here the parameter "Brightness input" is to be set on ".....external".
0	Alarm	1 Bit DPT_alarm	C, T	The function monitors the inputs of the external brightness sensors. If no telegram is received at the respective input within the set time, this is issued as an error via the communication object.
1	Input 1 / input 2	2 Byte DPT_Value_2_Float	C, W, U	External brightness values are received via this object. This value is included in the weighting of the output value. Weighting is to be set via the parameter.

10.6 Delay

Telegrams can be received via the "Input" object using the "Delay" application. The telegrams received are sent out on the "Output" object with a set delay time.
The object types for "Input" and "Output" can be collectively parameterised for different applications.

Delay objects

No.	Object name	Data type	Flags
0	Input (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W
0	Input (1 Bit)	1 Bit EIS7 / DPT 1.008	C, W
0	Input (1 Bit)	1 Bit EIS7 / DPT 1.007	C, W
0	Input (1 Byte 0..100 %)	1 Byte EIS6 / DPT 5.001	C, W
0	Input (1 Byte 0..255)	1 Byte EIS14 / DPT 5.010	C, W
0	Input (2 Byte Float)	2 Byte EIS5 / DPT 9.xxx	C, W
0	Input (2 Byte Signed)	2 Byte EIS10 / DPT 8.001	C, W
0	Input (2 Byte Unsigned)	2 Byte EIS10 / DPT 7.001	C, W
0	Input (4 Byte Float)	4 Byte EIS9 / DPT 14.xxx	C, W
0	Input (4 Byte Signed)	4 Byte EIS11 / DPT 13.001	C, W
0	Input (4 Byte Unsigned)	4 Byte EIS11 / DPT 12.001	C, W
1	Output (1 Bit)	1 Bit EIS1 / DPT 1.001	C, T
1	Output (1 Bit)	1 Bit EIS7 / DPT 1.008	C, T
1	Output (1 Bit)	1 Bit EIS7 / DPT 1.007	C, T
1	Output (1 Byte 0..100 %)	1 Byte EIS6 / DPT 5.001	C, T
1	Output (1 Byte 0..255)	1 Byte EIS14 / DPT 5.010	C, T
1	Output (2 Byte Float)	2 Byte EIS5 / DPT 9.xxx	C, T
1	Output (2 Byte Signed)	2 Byte EIS10 / DPT 7.001	C, T
1	Output (2 Byte Unsigned)	2 Byte EIS10 / DPT 7.001	C, T
1	Output (4 Byte Float)	4 Byte EIS9 / DPT 14.xxx	C, T
1	Output (4 Byte Signed)	4 Byte EIS11 / DPT 13.001	C, T
1	Output (4 Byte Unsigned)	4 Byte EIS11 / DPT 12.001	C, T
2	Delay time (2 Byte)	2 Byte EIS10 / DPT 7.001	C, R, W

10.7 Staircase lighting

With the "Staircase lighting" application, switching telegrams or value telegrams can be provided with a light-on time. Depending on the parameterisation, the application shows different communication objects:

- a 1-bit object for input and output

If an ON telegram is received via the "Input/Output" object, the light-on time is started immediately. This can be a light-on time of 00:10 min to 88:45 min, which is adjustable in 0.1 s steps. After expiration of the light-on time, the "Input/Output" object sends an OFF telegram.

- two 1-bit objects for input and output
- and two 1-byte objects for input and output

If a telegram is received via the "Input" object, the light-on time is started immediately and a telegram with the same value of the telegram received on the input is sent out on the "Output" object. This can be a light-on time of 00:10 min to 88:45 min, which is adjustable in 0.1 s steps. After expiration of the light-on time, the "Output" object sends out an OFF telegram (1-bit) or a telegram with the value "0" (1-byte).

Via two additional communication objects, it is possible to specify the light-on time and the switch-off prewarning time. The 2-byte values received are written to the memory of the device and are retained even after a bus power failure and subsequent return of voltage.

Staircase lighting objects

No.	Object name	Data type	Flags
0	Input (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W
0	Input (1 Byte)	1 Bit EIS14 / DPT 5.010	C, W
0	Input_Output (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W, T
1	Light-on time (2 Byte)	2 Byte EIS10 / DPT 7.001	C, R, W
2	Switch-off pre-warning	2 Byte EIS10 / DPT 7.001	C, R, W
3	Output (1 Bit)	1 Bit EIS1 / DPT 1.001	C, T
3	Output (1 Byte)	1 Bit EIS14 / DPT 5.010	C, T

10.8 Light scene actuator

With the "Light scene actuator" application, it is possible to call up scenes that are stored in the device via the receipt of a scene number on the 1-byte communication object "Scene call-up". A maximum of eight scenes with up to eight actuator objects can be created.
For triggering different actuators, the size of the actuator groups communication objects can be set under the "Actuator group type" parameter.
The user has the option of saving the scenes himself. A corresponding save telegram must be received for this (see the description of the individual parameters).

Light scene actuator objects

No.	Object name	Data type	Flags
0	Light scene call-up (1 Byte)	1 Byte / DPT18.001	C, W, U
1…10	Actuator group A [B…J] (1-bit switching)	1 Bit EIS1 / DPT 1.001	C, W, T, U
1…10	Actuator group A [B…J] (1-bit Venetian blind)	1 Bit EIS7 / DPT 1.008	C, W, T, U
1…10	Actuator group A [B…J] (1 Byte 0..100 %)	1 Byte EIS6 / DPT 5.001	C, W, T, U
1…10	Actuator group A [B…J] (1-byte light scene number)	1 Byte / DPT 18.001	C, W, T, U
1…10	Actuator group A [B…J] (Temperature value absolute)	2 Byte EIS5 / DPT 9.001	C, W, T, U
10…19	Enable scene 1 [Scene 2 … Scene 10]	1 Bit EIS1 / DPT 1.001	C, W, T

10.9 Sequence

With the "Sequence " application it is possible to send out multiple telegrams with different values in a predefined sequence consecutively over the same object.
In contrast to the scene, the "Sequence" application has only one communication object on which up to twelve individual values are consecutively sent in twelve firmly set times. The times can be freely set from 1 s to 12 h. The "Sequence" application lends itself to controlling showrooms for example.
The function can be temporarily blocked via an enable object.

Sequence objects

No.	Object name	Data type	Flags
0	Sequence value (1-bit switching)	1 Bit EIS1 / DPT 1.001	C, W, T, U
0	Sequence value (1 Byte 0..100 %)	1 Byte EIS6 / DPT 5.001	C, W, T, U
0	Sequence value (1 Byte 0..255)	1 Byte EIS14 / DPT 5.010	C, W, T, U
0	Sequence value (1-byte light scene number)	1 Byte / DPT 18.001	C, W, T, U
0	Sequence value (2 Byte Float)	2 Byte EIS5 / DPT 9.xxx	C, W, T, U
0	Sequence value (2 Byte Unsigned)	2 Byte EIS10 / DPT 7.001	C, W, T, U
1	Sequence start	1 Bit EIS1 / DPT 1.001	C, W
2	Sequence status	1 Bit EIS1 / DPT 1.001	C, T
4	Enable	1 Bit EIS1 / DPT 1.001	C, W

10.10 Preset

The "Preset" application makes an input and output communication object available. At the receipt of a switching telegram on the 1-bit input object, a telegram is immediately sent out on the 1-byte output object. A preset percent value or, alternatively, a light scene number can be sent out.

Preset objects

No.	Object name	Data type	Flags
0	Input (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W
0	Output (1 Byte 0..100 %)	1 Byte EIS6 / DPT 5.001	C, T
0	Output (1-byte light scene number)	1 Byte / DPT 18.001	C, T

10.11 Cyclic telegram

Via the "Cyclic telegram" application and after receipt of a telegram on the "Input" object, a telegram with the same volume is cyclically sent out on the "Cyclic output" object.
The object types for "Input" and "Output" can be collectively parameterised for the different applications.
The times for cyclic sending on the "Output" object are adjustable.
Via an additional "Enable" object, there is the option of temporarily blocking the function.

Cyclic telegram objects

No.	Object name	Data type	Flags
0	Input (1-bit switching)	1 Bit EIS1 / DPT 1.001	C, W
0	Input (1-bit alarm)	1 Bit EIS1 / DPT 1.001	C, W
0	Input (1 Byte 0..100 %)	1 Byte EIS6 / DPT 5.001	C, W
0	Input (1 Byte 0..255)	1 Byte EIS14 / DPT 5.010	C, W
0	Input (2 Byte Float)	2 Byte EIS5 / DPT 9.xxx	C, W
0	Input (2 Byte Signed)	2 Byte EIS10 / DPT 8.001	C, W
0	Input (2 Byte Unsigned)	2 Byte EIS10 / DPT 7.001	C, W
0	Input (2-byte temperature)	2 Byte EIS5 / DPT 9.001	C, W
0	Input (4 Byte Float)	4 Byte EIS9 / DPT 14.xxx	C, W
0	Input (4 Byte Signed)	4 Byte EIS11 / DPT 13.001	C, W
0	Input (4 Byte Unsigned)	4 Byte EIS11 / DPT 12.001	C, W
1	Output (1-bit switching)	1 Bit EIS1 / DPT 1.001	C, T
1	Output (1-bit alarm)	1 Bit EIS1 / DPT 1.001	C, T
1	Output (1 Byte 0..100 %)	1 Byte EIS6 / DPT 5.001	C, T
1	Output (1 Byte 0..255)	1 Byte EIS14 / DPT 5.010	C, T
1	Output (2 Byte Float)	2 Byte EIS5 / DPT 9.xxx	C, T
1	Output (2 Byte Signed)	2 Byte EIS10 / DPT 8.001	C, T
1	Output (2 Byte Unsigned)	2 Byte EIS10 / DPT 7.001	C, T
1	Output (2-byte temperature)	2 Byte EIS5 / DPT 9.001	C, T
1	Output (4 Byte Float)	4 Byte EIS9 / DPT 14.xxx	C, T
1	Output (4 Byte Signed)	4 Byte EIS11 / DPT 13.001	C, T
1	Output (4 Byte Unsigned)	4 Byte EIS11 / DPT 12.001	C, T
2	Enable	1 Bit EIS1 / DPT 1.001	C, W

10.12 Flashing

In order to trigger a flashing sequence on the output object, a telegram must be received on the input object beforehand. The "Flashing" parameter specifies whether the flashing sequence is started with an ON or an OFF telegram on the input object. Alternatively, the flashing sequence can be also be started with a "Change of state", i.e. if the input signal switches from "0" to "1" or from "1" to "0".

Flashing objects

No.	Object name	Data type	Flags
0	Input	1 Bit EIS1 / DPT 1.001	C, W
1	Output	1 Bit EIS1 / DPT 1.001	C, T

10.13 Logic

Logic objects

No.	Object name	Data type	Flags
0	Output (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W, T
0	Output (1 Byte)	1 Byte EIS14 / DPT 5.010	C, W, T
1	Input 1 (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W, U
1	Input 1 (1 Byte)	1 Byte EIS14 / DPT 5.010	C, W, U
2	Input 2 (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W, U
2	Input 2 (1 Byte)	1 Byte EIS14 / DPT 5.010	C, W, U
3	Input 3 (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W, U
3	Input 3 (1 Byte)	1 Byte EIS14 / DPT 5.010	C, W, U
4	Input 4 (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W, U
4	Input 4 (1 Byte)	1 Byte EIS14 / DPT 5.010	C, W, U
5	Input 5 (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W, U
5	Input 5 (1 Byte)	1 Byte EIS14 / DPT 5.010	C, W, U
6	Input 6 (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W, U
6	Input 6 (1 Byte)	1 Byte EIS14 / DPT 5.010	C, W, U
7	Input 7 (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W, U
7	Input 7 (1 Byte)	1 Byte EIS14 / DPT 5.010	C, W, U
8	Input 8 (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W, U
8	Input 8 (1 Byte)	1 Byte EIS14 / DPT 5.010	C, W, U
9	Input 9 (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W, U
9	Input 9 (1 Byte)	1 Byte EIS14 / DPT 5.010	C, W, U
10	Input 10 (1 Bit)	1 Bit EIS1 / DPT 1.001	C, W, U
10	Input 10 (1 Byte)	1 Byte EIS14 / DPT 5.010	C, W, U

10.14 Gate

The "Gate" application allows specific signals to be filtered and the signal flow to be temporarily blocked. The function has three communication objects: "Control input", "Input" and "Output".
The input or output object can assume different sizes.
The bit size can be freely assigned with the "Not assigned" setting. This means that the first internal or external group address/action that is assigned and already connected to some other communication object will specify the size.
The control can occur from "Input to output" or also from "Output to input", provided the control input allows this. Enabling via the control input can occur via an ON or an OFF telegram.
If, for example, the "Control input" setting is set to "ON telegram", only telegrams from the input are transmitted to the output, if prior to this the control input has received an ON telegram.
It is also possible to block signals via the "Filter function" setting. Either "nothing is filtered out" or the signal "ON is filtered out" or the signal "OFF is filtered out". This function is always necessary, for example, when only the ON telegram is interesting for a sensor and the sensor does not offer any filter function in its application program.

Gate objects

No.	Object name	Data type	Flags
0	Input	-	C, W, T
1	Output	-	C, W, T
2	Control input	1 Bit EIS1 / DPT 1.001	C, W

10.15 Min/Max value transducer

Up to eight input values can be compared with each other using the "Min/max value transducer" application. The application can output the highest input value, the smallest input value or the average of all input values on the output.
The size of the input objects, and with it also the size of the output object can be adapted for the most diverse applications.
You can select from the following object types:

– 1-byte 0..100 %, for comparison of percent values
– 1-byte 0..255, for the comparison of decimal values between 0 and 255
– 2-byte float, for the comparison of 2-byte floating point values (physical values such as temperature, brightness value etc.)
– 2-byte signed, for the comparison of decimal values between -32,768 and +32,767
– 2-byte unsigned, for the comparison of decimal values between 0 and 65,535
– 4-byte float, for the comparison of 4-byte floating point values (physical values such as acceleration, electrical current, work etc.)
– 4-byte signed, for the comparison of decimal values between -2,147,483,648 and 2,147,483,647
– 4-byte unsigned, for the comparison of decimal values between 0 and 4,294,967,295

Hint:
With whole numbers the average value is rounded.

Min/Max value transducer objects

No.	Object name	Data type	Flags
0	Output (1 Byte 0..100 %)	1 Byte EIS6 / DPT 5.001	C, T
0	Output (1 Byte 0..255)	1 Byte EIS14 / DPT 5.010	C, T
0	Output (2 Byte Float)	2 Byte EIS5 / DPT 9.xxx	C, T
0	Output (2 Byte Signed)	2 Byte EIS10 / DPT 8.001	C, T
0	Output (2 Byte Unsigned)	2 Byte EIS10 / DPT 7.001	C, T
0	Output (4 Byte Float)	4 Byte EIS9 / DPT 14.xxx	C, T
0	Output (4 Byte Signed)	4 Byte EIS11 / DPT 13.001	C, T
0	Output (4 Byte Unsigned)	4 Byte EIS11 / DPT 12.001	C, T
1…10	Input 1 [2…10] (1 Byte 0..100 %)	1 Byte EIS6 / DPT 5.001	C, W
1…10	Input 1 [2…10] (1 Byte 0..255)	1 Byte EIS14 / DPT 5.010	C, W
1…10	Input 1 [2…10] (2 Byte Float)	2 Byte EIS5 / DPT 9.xxx	C, W
1…10	Input 1 [2…10] (2 Byte Signed)	2 Byte EIS10 / DPT 8.001	C, W
1…10	Input 1 (2 Byte Unsigned)	2 Byte EIS10 / DPT 7.001	C, W
1…10	Input 1 [2…10] (4 Byte Float)	4 Byte EIS9 / DPT 14.xxx	C, W
1…10	Input 1 [2…10] (4 Byte Signed)	4 Byte EIS11 / DPT 13.001	C, W
1…10	Input 1 [2…10] (4 Byte Unsigned)	4 Byte EIS11 / DPT 12.001	C, W

10.16 Threshold value / hysteresis

With the "Threshold value / Hysteresis" application, value telegrams can be received on an input communication object and compared with threshold values specified in the device.
Predefined values are sent out on the communication "Output" communication object if the upper or lower thresholds are exceeded. The size of the object can be adjusted for different applications.
The function can be temporarily blocked via an enable object.
If the value of the lower threshold lies above the value for the upper threshold, the function is not executed.

Threshold value / hysteresis objects

No.	Object name	Data type	Flags
0	Input (1 Byte 0..100 %)	1 Byte EIS6 / DPT 5.001	C, W
0	Input (1 Byte 0..255)	1 Byte EIS14 / DPT 5.010	C, W
0	Input (2 Byte Float)	2 Byte EIS5 / DPT 9.xxx	C, W
0	Input (2 Byte Signed)	2 Byte EIS10 / DPT 8.001	C, W
0	Input (2 Byte Unsigned)	2 Byte EIS10 / DPT 7.001	C, W
0	Input (4 Byte Float)	4 Byte EIS9 / DPT 14.xxx	C, W
0	Input (4 Byte Signed)	4 Byte EIS11 / DPT 12.001	C, W
0	Input (4 Byte Unsigned)	4 Byte EIS11 / DPT 13.001	C, W
1	Output (1 Bit)	1 Bit EIS1 / DPT 1.001	C, T
1	Output (1 Byte 0..100 %)	1 Byte EIS6 / DPT 5.001	C, T
1	Output (1 Byte 0..255)	1 Byte EIS14 / DPT 5.010	C, T
2	Enable	1 Bit EIS1 / DPT 1.001	C, W

10.17 PWM inverter

With the "PWM inverter" application, a 1-byte input signal can be converted to a 1-bit signal or a 1-byte signal via an equivalent pulse-width modulation. This function is required, for instance, if a room temperature controller issues a constant control value that controls a switching heating actuator (for electrothermal actuating drives).
The function of the 1-byte sized activation is required if the room temperature controller can only send out constant control values or a constant control value is required for other functions (such as central supply line temperature control).
There is the option of activating a force-position. The force-position is used for certain events such as the opening of a window or for moving a heating actuator that is to be activated to a specific position for the dew point alarm.
If "Alert" is activated, the additional communication object "Fault" is available. A fault will then occur if the "Input" object has received no further telegram within a certain period of time. Possible reasons for this could be, for example, that the associated room temperature controller fails or that during a cross-line function the telegrams no longer pass the coupler. In this case an ON telegram is sent out on the "Fault" communication object and the "Input" object assumes the "Value for fault".
An additional "Enable" object provides the option of temporarily blocking the function.

PWM transducer objects

No.	Object name	Data type	Flags
0	Input (1 Byte)	1 Bit EIS1 / DPT 1.001	C, W
1	Output (1 Bit)	1 Bit EIS1 / DPT 1.001	C, T
1	Output (1 Byte 0..100 %)	1 Byte EIS6 / DPT 5.001	C, T
2	Enable	1 Bit EIS1 / DPT 1.001	C, W
3	Fault	1 Bit EIS1 / DPT 1.001	C, T
4	Force-position	1 Bit EIS1 / DPT 1.001	C, W

10.18 Priority

The "Priority" application has 3 communication objects, a 1-bit object "Switch input", a 2-bit object "Input priority" and a 1-bit object "Output". The telegrams received on the "Switch input" are transferred to the "Output" depending on the state of the "Input priority" object.
The 2-bit object "Input priority" can receive and differentiate between four different values (0, 1, 2 and 3). Here, the "Output" object is positively driven. Three different states are differentiated:
- "Input priority" has value "3": the value that is present on "Switch input" has no meaning. The "Output" is switched to positively driven and has the value "1".
– "Input priority" has the value "2". The value that is present on "Switch input" has no meaning. The "Output" is switched off positively driven and has the value "0".
– "Input priority" has the value "1" or "0". The "Output" is not positively driven. The "Switch input" is linked to the status bit of the priority object OR and transferred to the "Output".
During a positive drive, changes of the "Switch input" object are saved, even if the current state on the "Output" object does not immediately change through this. If the positive drive is terminated, a telegram transmission on the "Output" occurs according to the current value of the "Switch input" object.

Priority objects

No.	Object name	Data type	Flags
0	Switch input	1 Bit EIS1 / DPT 1.001	C, W
1	Priority input	2 Bit EIS8 / DPT 2.001	C, W
2	Output	1 Bit EIS1 / DPT 1.001	C, T

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