# User Manual

## K-BUS® KNX GPS Weather Station Pro_V1.1

### CSWSP-07/00.1.00

## KNX/EIB Home and Building Control System

# Attentions

**1.Please keep devices away from strong magnetic field, high temperature, wet environment;**


**2.Do not fall the device to the ground or make them get hard impact;**


**3.Do not use wet cloth or volatile reagent to wipe the device;**


**4.Do not disassemble the devices.**

# Contents

## Chapter 1 Summary

The KNX GPS Weather Station Pro for the KNX building bus system measures temperature, wind speed, wind direction, brightness air humidity and air pressure. It recognizes precipitation and receives the GPS signal for time and location. In addition, using location coordinates and the time, it calculates the exact position of the sun (azimuth and elevation).

All values can be used for the control of limit dependent switching outputs. States can be linked via AND logic gates and OR logic gates. Multi-function modules change input data as required by means of calculations, querying a condition, or converting the data point type.

The integrated shade control system allows intelligent sun protection control of up to 12 facades.

Functions are summarized as followed:

- Brightness measurement (current light strength). Measurement with 5 separate sensors, output of the current highest value (one maximum value). Separate limit values for night.
- GPS receiver, outputting the current time and location coordinates. The KNX GPS Weather Station Pro also computes the position of the sun (azimuth and elevation).
- Shade control for up to 12 facades with slat tracking and shadow edge tracking.
- Wind measurement: Measurement of wind strength and wind direction (0°- 360°) by ultrasound.
- Precipitation detection: The sensor surface is heated, so that only drops and flakes are recognised as precipitation, but not mist or dew. When the rain or snow stops, the sensor is soon dry again and the precipitation warning ends.
- Temperature measurement. Calculation of the felt temperature (considering wind strength and air humidity).
- Frost protection for shading systems.
- Air humidity measurement (relative, absolute).
- Bus message, whether the values of temperature and humidity are within the comfort field (DIN 1946). Calculation of the dew point.
- Air pressure measurement.

- Weekly and calendar time switch: All time switching outputs can be used as communication objects. The weekly time switch has 24 periods. Each period can be configured either as an output or as an input. If the period is an output, then the switching time is set per parameter or per communication object. The calendar time switch has 4 periods. Two on/off switching operations, which are executed daily, can be set for each period.
- Switching outputs for all measured and computed values. Threshold values can be adjusted per parameter or via communication objects.
- 8 AND and 8 OR logic gates, each with 4 inputs. All switching events as well as 16 logic inputs (in the form of communications objects) can be used as inputs for the logic gates. The output of each gate can be configured optionally as 1-bit or 2 x 8-bit.
- 8 multi-function modules (computers) for changing the input data by calculations, by querying a condition or by converting the data point type.
- Summer compensation for cooling systems. A characteristic curve matches the target temperature in the room to the external temperature and sets the minimum and maximum target temperature values.

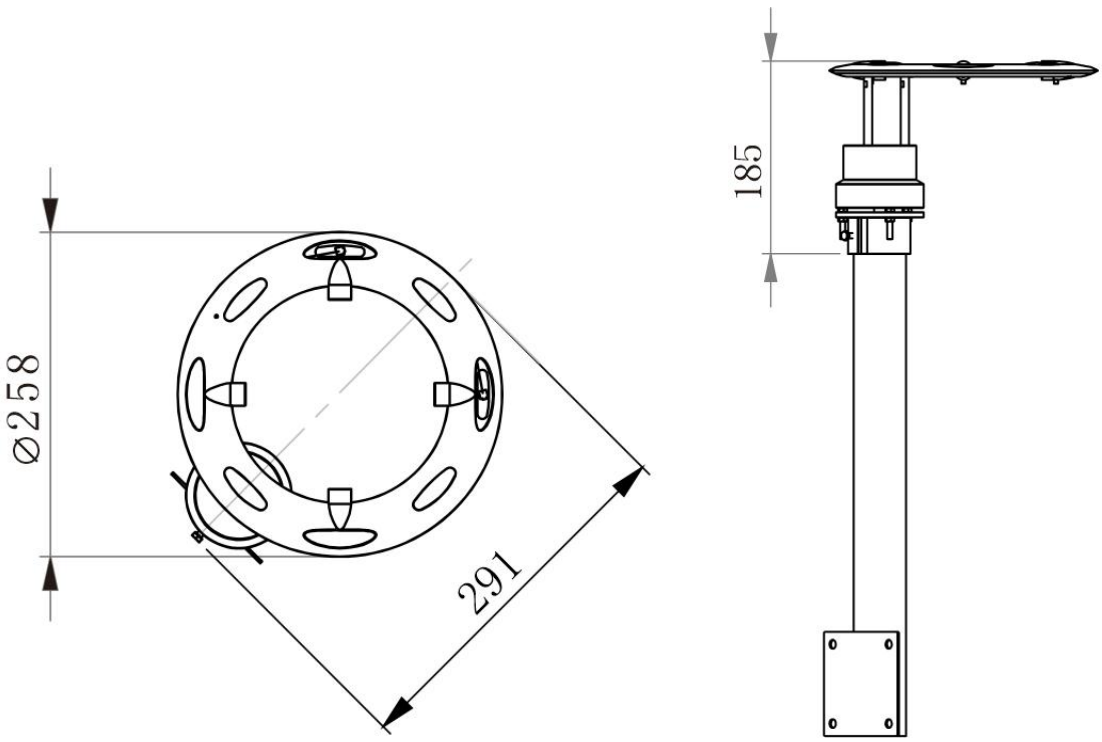
## Chapter 2 Technical date

| | | |
|---|---|---|
| **General** | Installation | Pole mounting |
| | Degree of protection | IP44 |
| | Dimensions(W x H x D) | 258*185*291mm |
| | Total weight | ≈600g |
| | Ambient temperature | -25...+50℃ |
| | Storage temperature | -30...+70℃ |
| **KNX bus** | Bus voltage | 21-30V DC, via the KNX bus |
| | Bus current | ⩽18mA/24V DC, ⩽15mA/30V DC |
| | Bus consumption | ⩽450mW |
| | Duration after bus voltage restoration until data is received | ≈8s |
| | Medium | TP1-256 |
| | Configuration mode | S-Mode |
| **Auxiliary supply** | Voltage | 21.6~26.4V DC |
| | Current [at] | ⩽250mA/24V DC [t > 7.5°C]<br>⩽1.6A/24V DC [t⩽ 7.5°C] |
| | consumption [at] | ⩽6 W [t > 7.5°C]<br>⩽40 W [t⩽ 7.5°C] |
| **Sensors** | Measurement range temperature | -25...+50℃ |
| | Measurement range air humidity (rH) | 0%...100% |
| | Measurement range wind speed | 0...35 m/s |
| | Measurement range wind direction [from wind speed] | 0...360° [v>0.5m/s] |
| | Measurement range pressure | 300 mbar....1100 mbar |
| | Measurement range brightness | 0 Lux...150000 Lux |

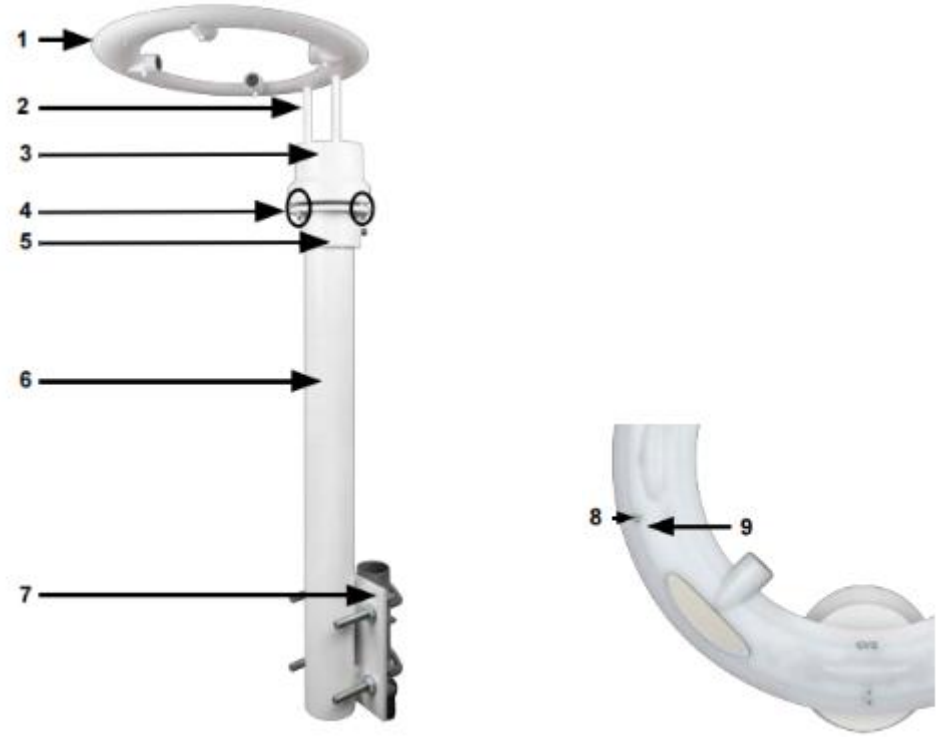
| Application | Maximum of communication objects | Maximum number of group addresses | Maximum number of associations |
|---|---|---|---|
| **KNX GPS Weather Station Pro/1.0** | **1414** | **2000** | **2000** |

# Chapter 3 Dimension and structural diagram

## 3.1 Dimension diagram



### 3.2 Structural diagram




1 Ring with sensors

2 Ring – base connector

3 Base with temperature and humidity sensor, control electronics and bus connection socket

4 Threaded rods with self-locking nuts for setting the angle

5 Base holder

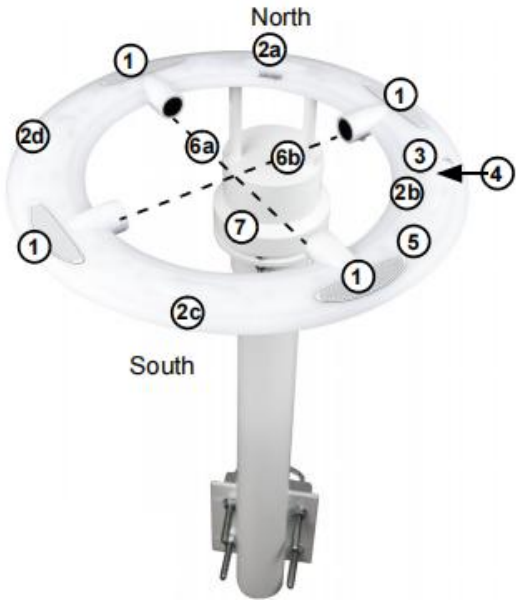
6 Mast extension

7 Mast holder with fastening brackets

8 PRG magnetic switch (can be triggered with the enclosed magnet)

9 Programming LED

### 3.3 Position of the sensors




1 Precipitation sensors (4 surfaces with conductor tracks)

2 Brightness sensors under plastic domes, directed to wards:

a - North b - East c - South d - West and up (sky)

3 Pressure sensor

4 Magnet PRG button (magnetic switch) for addressing the device

5 GPS module

6 Wind sensor with ultrasonic measuring sections

a - North-east/South-west

b - South-east/North-west

7 Temperature and humidity sensor in the base

### 3.4 Installation instructions

**CAUTION!**

**Live voltage!**

There are unprotected live electric components inside.

Installation and commissioning may only be handled by an electrician.

• Only operate devices if they are free from damage.

• Comply with country-specific standards, directives, specifications and provisions for electrical installation.

• Switch off voltage to the system during installation.

• Place out of reach of persons.

• Select an installation position on the building where the sensors can measure wind, rain and sunshine without hindrance.

• Do not install below construction parts from which water can still drip onto the rain sensor even after it has stopped raining or snowing.

• Avoid installation locations that are heated or cooled by sources of interference (solar radiation on building structure etc.)

• Do not place near magnetic fields, transmitters and interference fields from electrical consumers (e.g. fluorescent lamps, neon signs, switching power supplies, etc.) as this may interfere with GPS reception.

The device may only be operated as a fixed-site installation, when assembled and after conclusion of all installation and operational start-up tasks and only in the surroundings designated for it.

Improper use, modifications to the device or failure to observe this manual will void any warranty and guarantee claims.

The networks connected to the device (KNX and supply voltage) must be entirely within the same earthing system.

**Fig.1:**


**Fig.2:**

Leave a distance of at least 60 cm below, to the sides and to the front from other elements (building structure, construction parts, etc.).

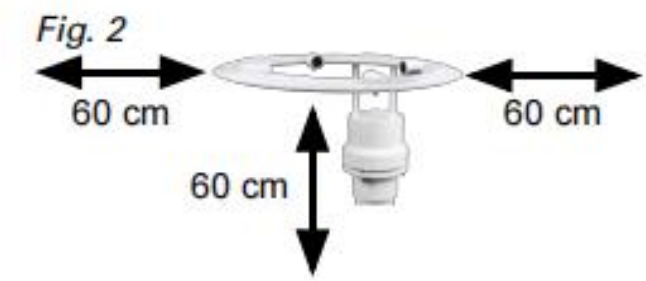
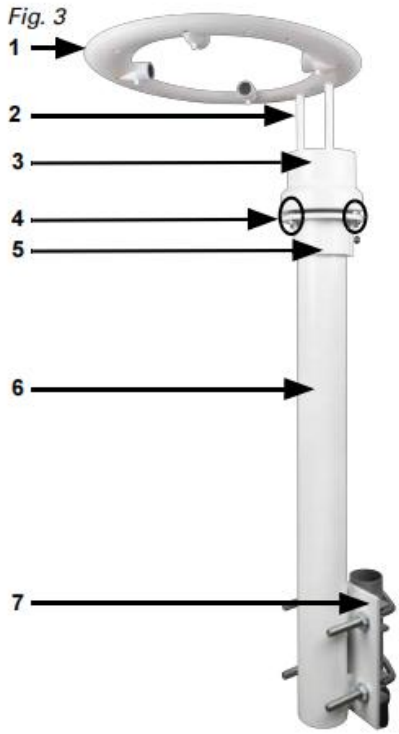


**Fig.3: Device setup**




1 Ring with sensors

2 Ring – base connector

3 Base with temperature and humidity sensor, control electronics and bus connection socket

4 Threaded rods with self-locking nuts for setting the angle

5 Base holder

6 Mast extension

7 Mast holder with fastening brackets

**ATTENTION!**

Sensitive sensors!

• Only hold the device by the base.

• Do not mechanically load (bend) the ring and connections. Caution Lever effect!

**Fig.4+5**

The connection to the KNX bus and the supply voltage is via the bushing in the base. To do this, screw the base by the base holder. Screw the M8 plug connector on the connection cable to the connection socket (A). The cable can be passed through the mast extension (Fig. 5a) or out between base and base holder (Fig. 5b).Fasten the device with the mast extension to a vertical mast or a horizontal railing.

*Fig. 4*

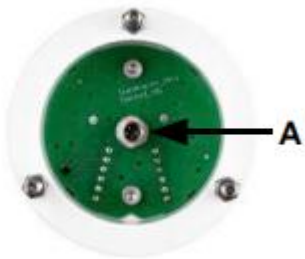



*Fig. 5a*

*Fig. 5b*


**Fig.5b-7**

Place the weather station with the base and the base holder on the mast extension.

Align the device along the north south axis. The base (C) must be in the north, the ring must face south.

For the next steps, use the enclosed fork wrenches and the circular level.

Use the screw to fix the weather station in the base holder (B).

Place the ring horizontally by adjusting the angle using the 3 threaded rods and the 3 nuts between the base and base holder. Then fix the base with the 3 nuts, which are located on the bottom end of the threaded rods.

Wind can only be recorded correctly if the ring is horizontal.

Fig. 6

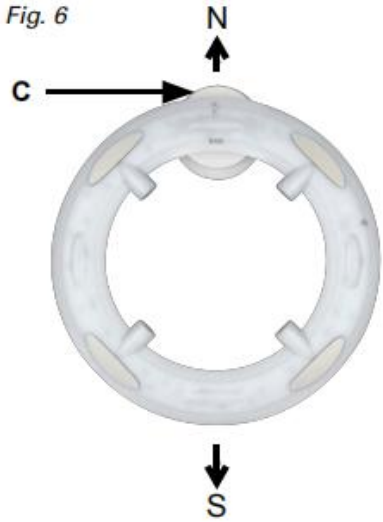



Fig. 7

**Fig.8 Connection to KNX bus**

Use the supplied junction box and terminals to connect the loose end of the connection cable to the KNX bus and the mains unit (supply voltage).

| KNX | Supply voltage |
|---|---|
| + Red<br>- Black | + Yellow<br>- White |

Set the voltage to 24 V DC b turning the adjusting screw on the mains unit (D) fully to the left. Over voltage protection installed on site is recommended.

*Fig. 8*

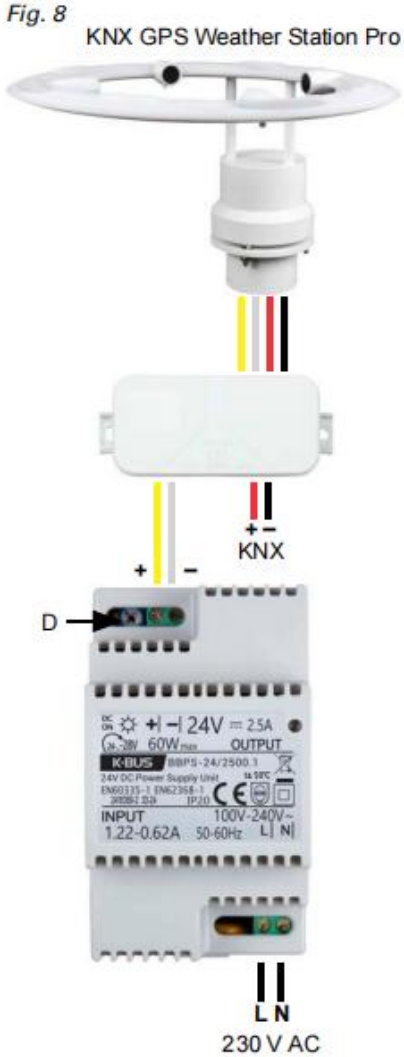
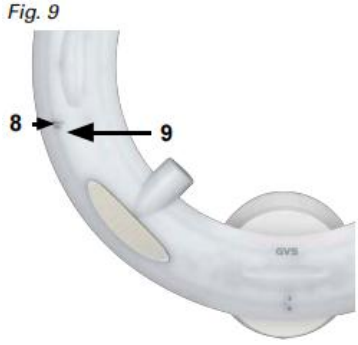



**Fig.9 Addressing the equipment**

8 PRG magnetic switch (can be triggered with the enclosed magnet)

9 Programming LED

*Fig. 9*



# Chapter 4 Parameter setting description in the ETS

## 4.1 Parameter window “General settings”

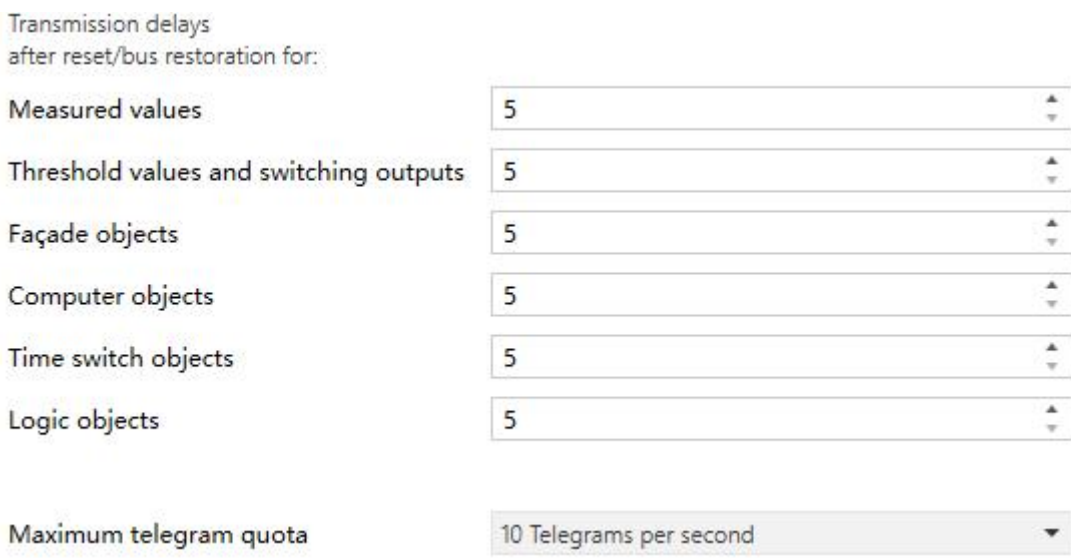



Fig.4.1 Parameter window “General settings”

### Transmission delays after reset/bus restoration for:

Parameter “Measured values”

Parameter “Threshold value and switching outputs”

Parameter “Facade object”

Parameter “Computer object”

Parameter “Time switch object”

Parameter “Logic outputs”

Parameter “Maximum telegram quota”

Set basic characteristics of data transfer. A different transmission delay prevents an overload of the bus shortly after the reset.

Options: **5sec/.../2h**

Options: **1 telegram per second/.../50 telegram per second**

## 4.2 Parameter window “GPS settings”

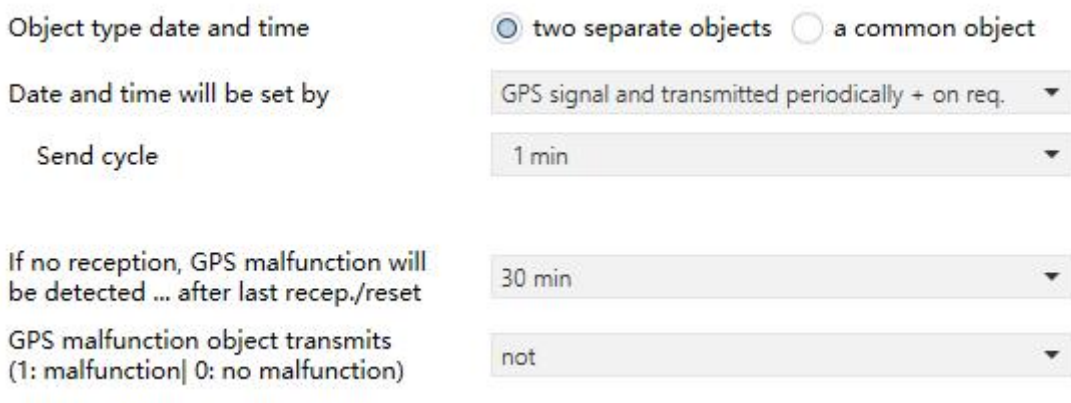



Fig.4.2 Parameter window “GPS settings”

**Parameter “Object type date and time”**

Set whether the time and date are to be sent as separate objects or as one common object.

Options:

**two separate objects**

**a common object**

If time and date are set by two objects, then only a maximum of 10 seconds may elapse between receiving the date and receiving the time Furthermore, a change of date may not occur between receiving both objects. The objects must be received by the device on the same day.

**Parameter “Date and time will be set by”**

Specify whether the time and date are to be set by the GPS signal or objects.

If time and date are set by the GPS-Signal, the data is available as soon as a valid GPS signal is received.

If time and date are set by the GPS-Signal, the data is available as soon as a valid GPS signal is received.

Options:

**GPS signal and not transmitted**

**GPS signal and sent transmitted periodically**

**GPS signal and transmitted on request**

**GPS signal and transmitted periodically + on req.**

**Object(s) and not transmitted**

**——Parameter "Send cycle"**

This parameter is visible when previous parameter is selected "Object(s) and not transmitted" and "GPS signal and transmitted on request and periodically".

When sending periodically, the date and time are sent on the bus in a fixed cycle that can be set here.

**Note: The device has an integrated real-time clock. Therefore, time keeps on running internally and can be sent to the bus, even when no GPS coverage is available or no time object has been received for some time. The internal clock can show a time drift of up to ±6 seconds per day.**

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**Parameter "If there is no reception, GPS malfunction will be detected ... after last recep./reset"**

After the bus voltage is applied or restored, it can take up to 10 minutes until the GPS signal is received, sometimes even longer at locations with poor GPS reception. Therefore, a longer duration should be chosen in such cases.

Options:

**20min**

**30min**

**...**

**1.5h**

**2h**

**Parameter "GPS malfunction object transmits(1=Malfunction | 0=no Malfunction)"**

The information of the GPS fault can be used by other bus participants for monitoring. The transmission behaviour can be set here to match this.

Options:

**not**

**on change**

**on change to 1**

**on change to 0**

**on change and periodically**

**on change to 1 and periodically**

**on change to 0 and periodically**

**——Parameter "Send cycle"**

This parameter is visible when previous parameter is selected "on change and periodically " , "on change to 1 and periodically " and "on change to 0 and periodically".

When sending periodically, the GPS fault is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

### 4.3 Parameter window “Location”

The location data is required in order to be able to calculate the position of the sun with the help of the date and time.

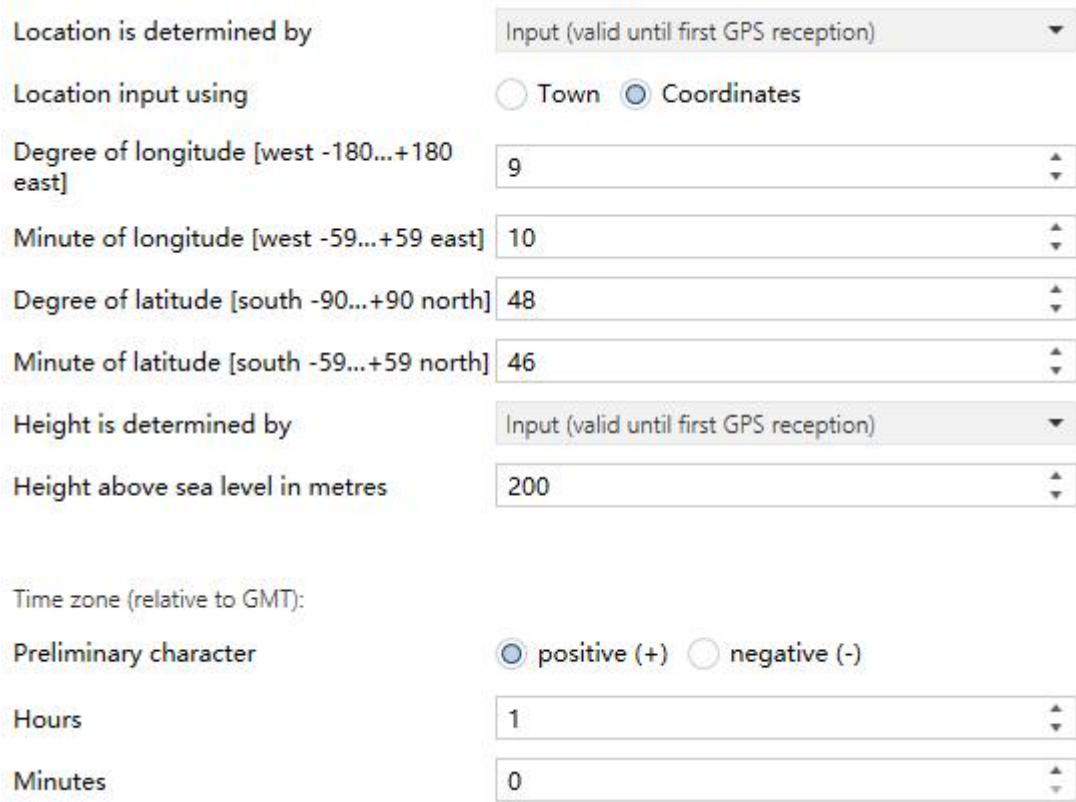



Fig.4.3 Parameter window “Location”

**Parameter “Location is determined by”**

The location is received via GPS or entered manually (selection of the nearest town or by entering coordinates).

Also when using the GPS signal coordinates can be entered manually for the initial commissioning. This data is used as long as no GPS reception exists. For this you select the option "Input (only valid until the first GPS reception)".

options: **Input/Input (valid until first GPS reception)/GPS reception**

**——Parameter "Location input using"**

This parameter is visible when previous parameter is selected "input" or "Input (valid until first GPS reception)".

This parameter is used to set location input using town or coordinates.

options:

**Town**

**Coordinates**

**Parameters as follow are visible when "Location input using" is selected "Town".**

**——Parameter "Country"**

**——Parameter "Town"**

This parameter is used to set the country and town.

options: **Belgium/.../USA**

options: **Antwerp/.../Oostende**

**Parameters as follow are visible when "Location input using" is selected "Coordinates".**

**——Parameter "Degree of longitude [west -180…+180 east]"**

**——Parameter "Minute of longitude [west -59…+59 east]"**

**——Parameter "Degree of latitude [south -90…+90 north]"**

**——Parameter "Minute of latitude [south -59…+59 north]"**

This parameter is used to set the latitude and longitude position.

options: **-180...180**

options: **-59...59**

options: **-90...90**

options: **-59...59**

**——Parameter "Height is determined by"**

**——Parameter "Height above sea level in metres"**

The location-height above sea level is used to calculate the normal air pressure (see chapter 4.22 pressure measure threshold).

The height is received per GPS or entered manually.

When using the GPS signal a height can be entered manually for the initial commissioning. This data is used as long as no GPS reception exists. For this you select the option "Input (only valid until the first GPS reception)".

options: **Input/Input (valid until first GPS reception/)/GPS reception**

options: **-1000...10000**

**Time zone(relative to GMT):**

**Parameter "Preliminary character"**

**Parameter "Hours"**

**Parameter "Minutes"**

**Parameter "Summertime Rule"**

**All the following times are to be entered as winter time=standard time**

**Start/End of summer time**

**Parameter "On"**

**Parameter "From (day)"**

**Parameter "(Month)"**

**Parameter "(Minute)"**

**Parameter "(Hours)"**

**Parameter "(Minutes)"**

In order to be able to output the local time, the time zone (difference to world time (Coordinated Universal Time)) and the summer time rules must be defined. Specify the hours and minutes after winter time (standard time).

Options:**Positive(+)/Negative(-)**

Options: **0...13**

Options: **0...59**

Options:**Europe/USA/User-defined/None**

Options: **Monday/.../Sunday/Date**

Options: **1...31**

Options: **1...12**

Options: **0...23**

Options: **0...59**

Options: **-12...12**

Options: **0...59**

**Parameter "Transmit coordinates"**

The standard coordinates can be transmitted from the device to the bus and thus be used in other applications, no matter whether they have been received via GPS or specified manually.

Options:

**Not**

**Periodically**

**On change**

**On change and periodically**

**——Parameter "Send cycle"**

This parameter is visible when previous parameter is selected "Periodically" and "On change and periodically".

When sending periodically, the position coordinates are sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter “on change of”**

This parameter is visible when previous parameter is selected “On change” and “On change and periodically”.

When sending on change, the location coordinates are sent on the bus as soon as they change by the value set here.

Options:

**0.5°**

**1°**

**...**

**10°**

### 4.4 Parameter window “Rain”

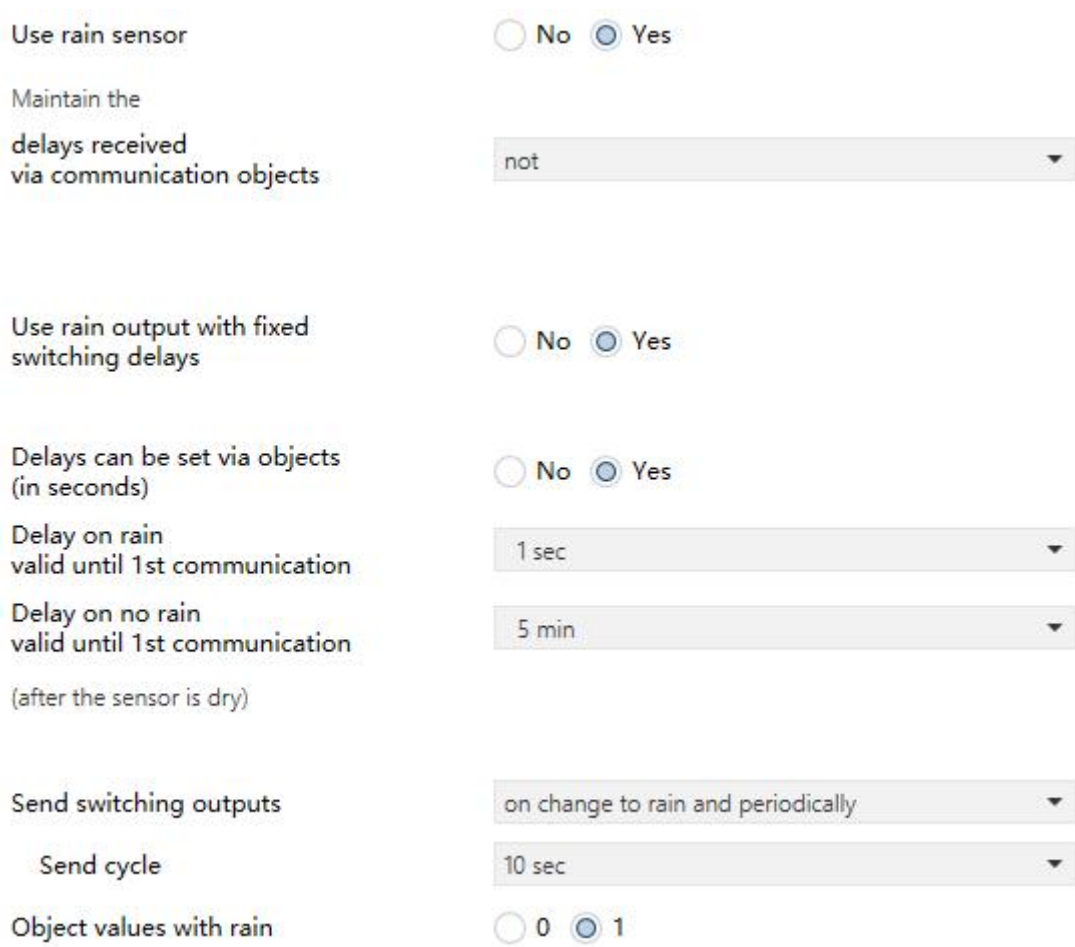



Fig.4.4 Parameter window “Rain”

**Parameter “Use rain sensor”**

This parameter is used to set whether use rain sensor.

Options:

**No**

**Yes**

**Parameters as follow are visible when “use rain sensor” is selected “yes”.**

**Parameter “delays received via communication objects”**

Set, in which cases delay times received are to be kept per object. The parameter is only taken into consideration if the setting by object is activated further down.

Options:

**Not**

**After power supply restoration**

**After power supply restoration and programming**

**Note: The setting "After power restoration and programming" should not be used for the initial start-up, as the factory settings are always used until the first call (setting via objects is ignored).**

**Parameter "Use rain output with fixed switching delays"**

Select whether the special rain output is to be used with fixed switching delay. This switching output has no delay on rain recognition and 5 minutes delay after it is dry again.

Options:

**No**

**Yes**

**Parameter "Delays can be set via objects(in seconds)"**

**Parameter "Delay on rain valid until 1st communication"**

**Parameter "Delay on no rain valid until 1st communication"**

Set the delay times. If the delays are defined using objects, then the times set here are only valid up to the first call.

Options: **none/5 sec/10s/.../1.5h/2h**

Options: **5 min/10s/.../1.5h/2h**

**(after the sensor is dry)**

**Parameter "Switching output sends"**

Here you set when the switching output is to be sent to the bus.

Options:

**on change**

**on change to rain**

**on change to no rain**

**on change and periodically**

**on change to rain and periodically**

**on change to no rain and periodically**

**——Parameter "Send cycle"**

This parameter is visible when previous parameter is selected "on change and periodically " , "on change to 1 and periodically " and "on change to 0 and periodically".

When sending periodically, the rain switching output is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**Parameter "Object values with rain"**

Define the object value for the rain.

Options:

**0**

**1**

## 4.5 Parameter window “Temperature”

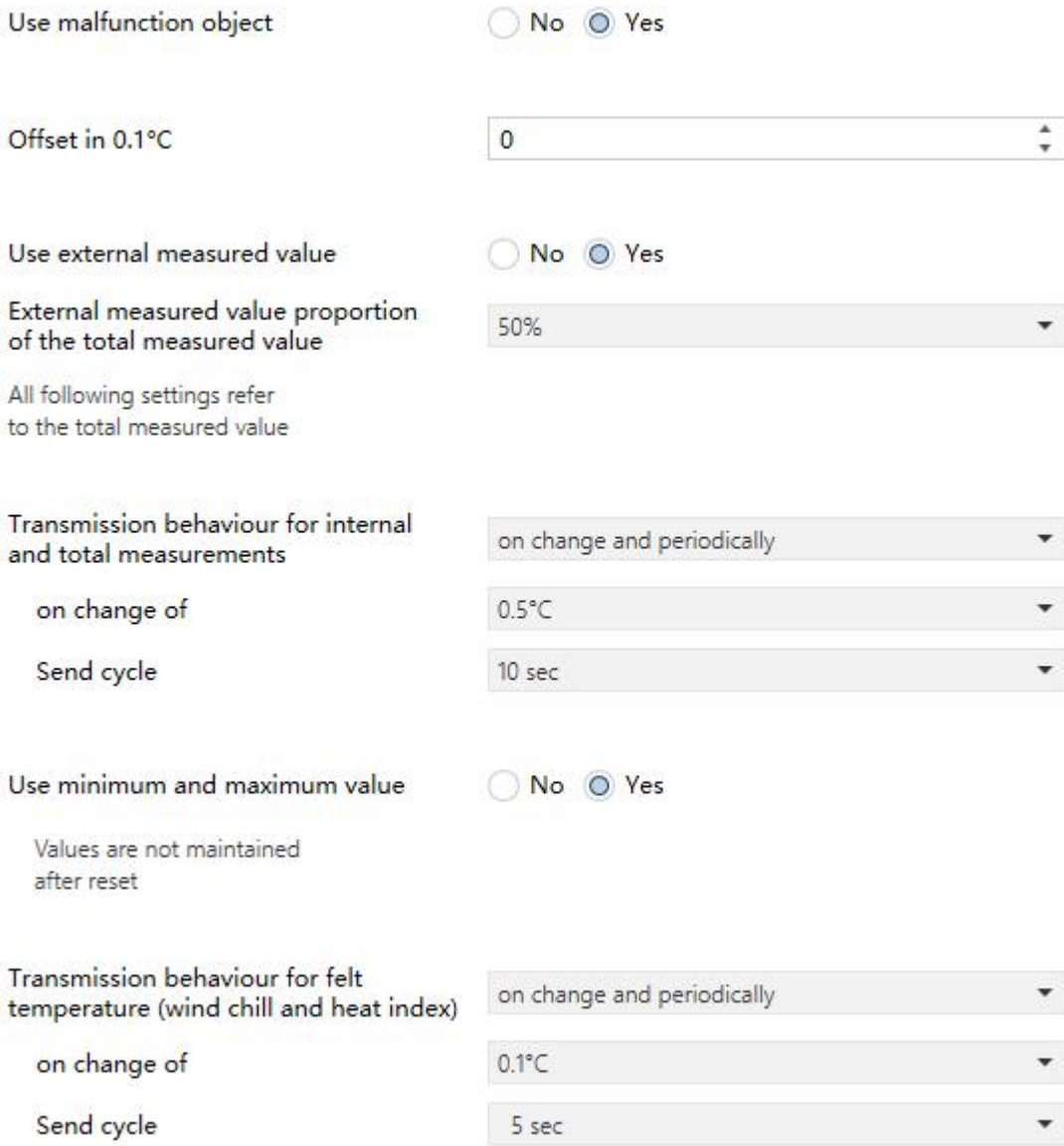



Fig.4.5 Parameter window “Temperature”

**Parameter “Use malfunction object”**

First of all set whether the temperature sensor malfunction object is to be used and correct.

Options:

**No**

**Yes**

**Parameter "Offset in 0.1℃"**

The output temperature value can be corrected here by an offset value if required. In this way, deviations caused by sources of interference can be compensated for, e.g. dark surfaces that heat up.

Options: **-50...50**

**Parameter "Use external measured value"**

This parameter is used to set whether use external measured value.

Options:

**No**

**Yes**

**——Parameter "External measured value proportion of the total measured value"**

This parameter is visible when previous parameter is selected "yes" .

This parameter is used to set the external measured value proportion of the total measured value.

Options:

**5%**

**10%**

**...**

**95%**

**100%**

**All following settings refer to the total measured value**

**Parameter "Transmission behaviour for internal and total measurements "**

This parameter is used to set the transmission behavior for the internal and total measurements.

Options:

**Not**

**Periodically**

**On change**

**On change and periodically**

**——Parameter “Send cycle”**

This parameter is visible when previous parameter is selected “periodically” and “on change and periodically” .

When sending periodically, the temperature value is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter “on change of”**

This parameter is visible when previous parameter is selected “on change” and “on change and periodically” .

When sending on change, the temperature value is sent on the bus as soon as it changes by the value set here.

Options:

**0.5℃**

**0.2℃**

**...**

**2.0℃**

**5.0℃**

**Parameter "Use minimum and maximum values"**

Select whether the minimum and maximum value should be used.

Options:

**No**

**Yes**

**Values are not maintained after reset**

**Yes**

**Parameter "Transmission behaviour for felt temperature (wind chill and heat index)"**

Define the transmission behavior for the felt temperature.

Options:

**Not**

**Periodically**

**On change**

**On change and periodically**

**——Parameter "Send cycle"**

This parameter is visible when previous parameter is selected "periodically" and "on change and periodically" .

When sending periodically, the temperature value is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter “on change of”**

This parameter is visible when previous parameter is selected “on change” and “on change and periodically” .

When sending on change, the temperature value is sent on the bus as soon as it changes by the value set here.

Options:

**0.5℃**

**0.2℃**

**...**

**2.0℃**

**5.0℃**

## 4.6 Parameter window “Temperature threshold value”

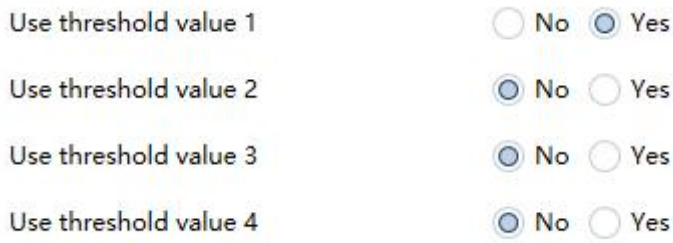



Fig.4.6 Parameter window “Temperature threshold value”

**Parameter “Use threshold value 1/2/3/4”**

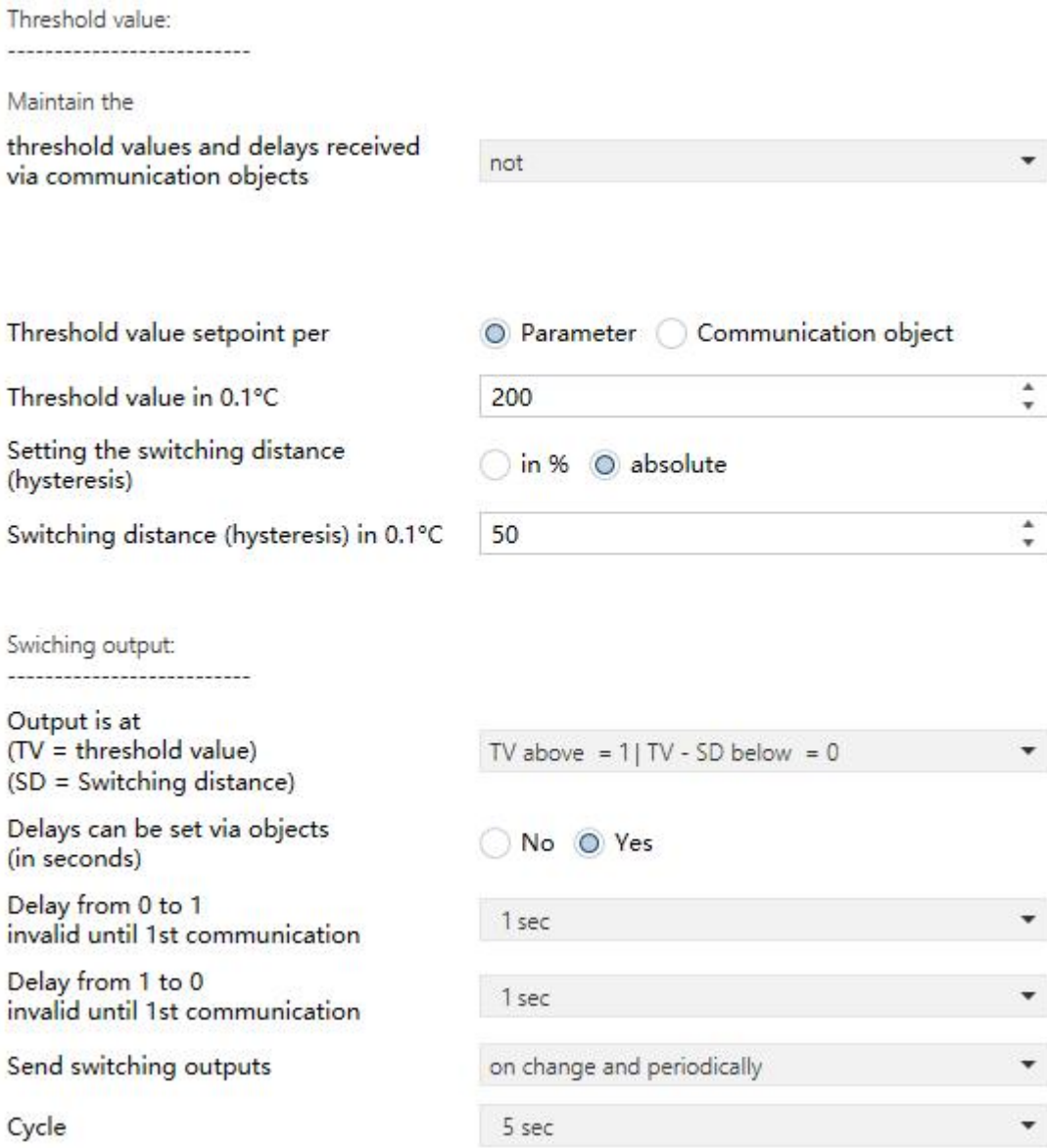
This parameter is used to set whether use temperature threshold value.

Options:

**No**

**Yes**

### 4.6.1 Parameter window “Threshold value 1/2/3/4”



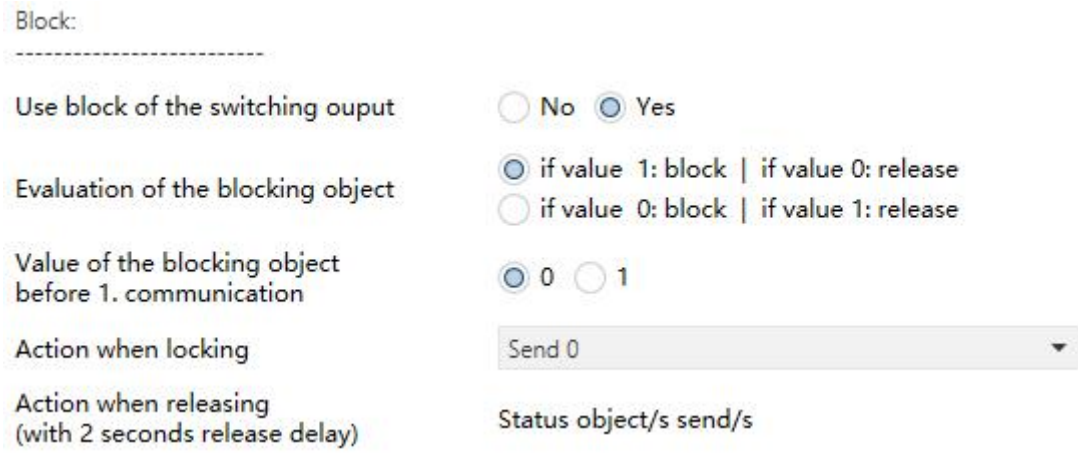



Fig.4.6.1 Parameter window “Temperature threshold value 1/2/3/4”

**Threshold value:**

**Maintain the**

**Parameter “Threshold value and delay received via communication objects”**

Set, in which cases threshold values and delay times received are to be kept per object. The parameter is only taken into consideration if the specification/ setting by object is activated further down.

Options:

**not**

**After power supply restoration**

**After power supply restoration and programming**

**Note: The setting "After power restoration and programming" should not be used for the initial start-up, as the factory settings are always used until the first call (setting via objects is ignored).**

**Parameter “Threshold value setpoint per”**

Select whether the threshold value is to be specified per parameter or via a communication object.

Options:

**Parameter**

**Communication object**

**——Parameter "Threshold value in 0.1℃"**

The parameter is visible when previous parameter is selected "parameter" .

When the threshold value per parameter is specified, then the value is set.

Options: **-300...800**

**Parameter "Setting the switching distance (hysteresis) "**

**Parameter "Switching distance (hysteresis) in %"**

With both of the methods for specifying the threshold values the switching distance (hysteresis) is set.

The switching distance prevents the switching output of the threshold value from changing too often in the event of temperature fluctuations. When the temperature drops, the switching output does not react until the switching distance falls below the threshold value. When the temperature rises, the switching output only reacts when the switching distance falls below the threshold value.

Options:**In %/absolute**

Options: **0...50/0...1100**

**These parameter is visible when "threshold value setpoint per" is selected "communication object" .**

**——Parameter "Start threshold value in 0.1℃ valid until 1.communication"**

If the threshold value is set by a communication object, during the initial commissioning a threshold value must be specified which is valid until the 1st communication of a new threshold value. With weather stations that have already been taken into service, the last threshold value communicated is used.

From the 1st communication, the threshold value corresponds to the value of the communication object and is not multiplied by the factor 0.1.

Once a threshold value is set via parameter or communication object, the last set threshold value remains until a new threshold value is transmitted by a communication object.

The last threshold values set by communications objects are saved in the device, so that they are retained during a power outage and are available once again when power is restored.

Options: **-300...800**

**——Parameter "Object value limit (min) in 0.1℃"**

**——Parameter "Object value limit (max) in 0.1℃"**

This parameter is used to set the object value limit.

Options: **-300...800**

**——Parameter "Type of threshold change"**

This parameter is used to set the type of change to the threshold value .

Options:

**Absolute value**

**Increment/decrement**

**——Parameter "Step size"**

This parameters are visible when previous parameter is selected "Increment/decrement".

This parameter is used to set the set the increment/decrement step size

Options:

**0.1℃**

**0.2℃**

**...**

**4℃**

**5℃**

**Switching output:**

**Parameter "Output is at (TV=threshold value)(SD=Switching distance))"**

Define which value the output transmits if the threshold value is exceeded or undercut.

Options:

**TV above = 1 | TV - SD below = 0**

**TV above = 0 | TV - SD below = 1**

**TV below = 1 | TV - SD above = 0**

**TV below = 0 | TV - SD above = 1**

## Parameter "Delays can be set via objects (in seconds)"

This parameter is used to set whether delays can be set via objects.

Options:

**No**

**Yes**

**——Parameter "Switch delay from 0 to 1"**

**——Parameter "Switch delay from 1 to 0"**

These parameters are visible when previous parameter is selected "no".

This parameter is used to set the switch delay from 0 to 1/ 1 to 0.

Options: **none/5 sec/10s/.../1.5h/2h**

Options: **none/5 sec/10s/.../1.5h/2h**

**——Parameter "Delay from 0 to 1 invalid until 1st communication"**

**——Parameter "Delay from 1 to 0 invalid until 1st communication"**

These parameters are visible when previous parameter is selected "yes".

This parameter is used to set the delay from 0 to 1/1 to 0 invalid until 1st communication.

Options: **none/5 sec/10s/.../1.5h/2h**

Options: **none/5 sec/10s/.../1.5h/2h**

## Parameter "Switching output sends"

This parameter is used to set in which cases the switch output transmits.

Options:

**on change**

**on change to 1**

**on change to 0**

**on change and periodically**

**on change to 1 and periodically**

**on change to 0 and periodically**

**——Parameter “Send cycle”**

This parameter is visible when previous parameter is selected “on change and periodically ” , “on change to 1 and periodically ” and “on change to 0 and periodically”.

When sending periodically, the temperature threshold value switching output is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**Blocking:**

**Parameter “Use block of the switching output”**

With the help of the ”Blocking” input object, the switching output can be blocked, e.g. by a manual command (push button).

Options:

**No**

**Yes**

**Parameters as follow are visible when "Use block of the switching output" is selected "yes".**

**Parameter "Evaluation of the blocking object"**

This parameter is used to set what a 1 or 0 at the block entry means.

Options:

**If value 1:block | if value 0:release**

**If value 0:block | if value 1:release**

**Parameter "Value of the blocking object before 1. communication"**

An object value up to the 1st communication is specified here.

Options:

**0**

**1**

**Parameter "Action when locking"**

**Parameter "Action when releasing:(with 2 seconds release delay)"**

The behaviour of the switching output during locking can be set.

Options: **do not send telegram/Send 0/Send 1**

Options: **dependent on the value of the parameter "Switching output sends"**

### 4.7 Parameter window “Frost alarm”

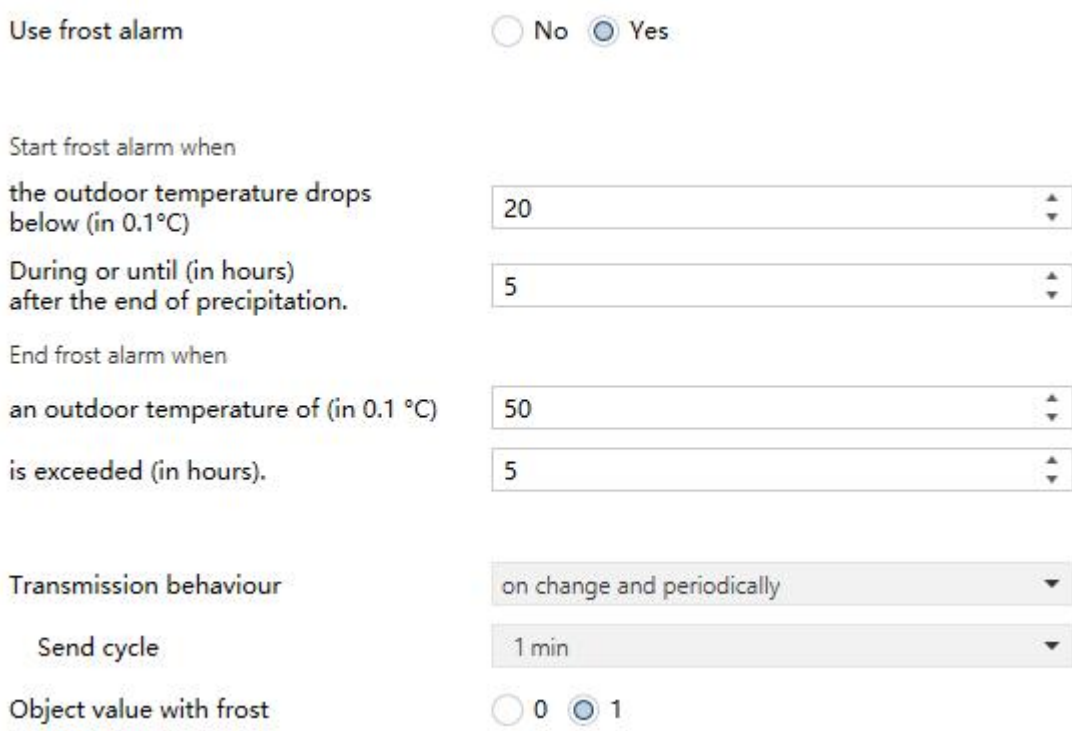



Fig.4.7 Parameter window “Frost alarm”

**Parameter “Use frost alarm”**

This parameter is used to set whether use frost alarm.

Options:

**No**

**Yes**

**Parameters as follow are visible when “Use frost alarm” is selected “yes”.**

**Start frost alarm when/End frost alarm when**

**Parameter “the outdoor temperature drops below(in 0.1 °C)”**

**Parameter “During or until (in hours) after the end of precipitation”**

**Parameter “an outdoor temperature of (in 0.1°C)”**

**Parameter "is exceeded (in hours)."**

Set which conditions are valid for the frost alarm. The frost alarm is active in cold outdoor temperatures in combination with precipitation.

Options: **-50...40**

Options: **1...10**

Options: **30...1000**

Options: **1...10**

**Parameter "Transmission behaviour"**

This parameter is used to set the transmission behavior of the frost alarm.

Options:

**On change**

**On change to frost**

**On change to no frost**

**On change and periodically**

**On change to frost and periodically**

**On change to no frost and periodically**

**——Parameter "Send cycle"**

This parameter is visible when previous parameter is selected "on change and periodically " , "on change to frost and periodically " and "on change to no frost and periodically".

When sending periodically, the frost alarm is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

## Parameter "Object value with frost"

Define the object value with frost.

Options:

**0**

**1**

### 4.8 Parameter window “Humidity measured value”

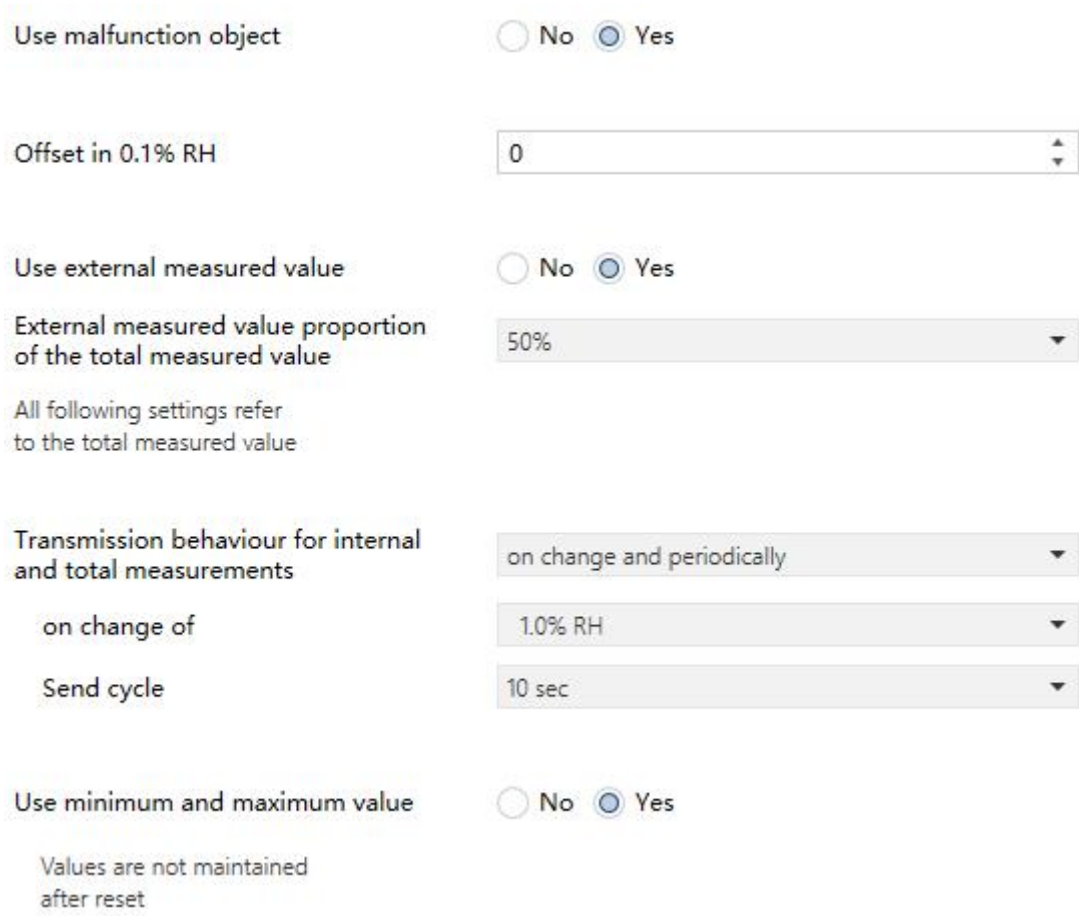



Fig.4.8 Parameter window “Humidity measured value”

**Parameter “Use malfunction object”**

Select, whether a malfunction object is to be sent if the sensor is faulty.

Options:

**No**

**Yes**

**Parameter “offset in 0.1% RH”**

Use Offsets to adjust the readings to be sent.

Options: **-100...100**

**Parameter "Use external measured value"**

This parameter is used to set whether use external measured value.

Options:

**No**

**Yes**

**Parameter "External measured value proportion of the total measured value"**

This parameter is used to set external measured value proportion of the total measured value.

Options:

**5%**

**10%**

**...**

**95%**

**100%**

**All following settings refer to the total measure value**

**Parameter "Transmission behaviour for internal and total measurements"**

This parameter is used to set the transmission behavior of the frost alarm .

Options:

**Not**

**Periodically**

**On change/**

**On change and periodically**

**——Parameter "Send cycle"**

This parameter is visible when previous parameter is selected "periodically" and "on change and periodically " .

When sending periodically, the humidity measured value is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter "on change of"**

This parameter is visible when previous parameter is selected "on change" and "on change and periodically " .

When sending on change, the humidity measured value sent on the bus as soon as it changes by value set here.

Options:

**0.1% RH**

**0.2% RH**

**...**

**10.0% RH**

**20.0% RH**

**Parameter "Use minimum and maximum value"**

The minimum and maximum readings can be saved and sent to the bus. Use the "Reset humidity min/max value" object to reset the values to the current readings. The values are not retained after a reset.

Options:

**No**

**Yes**

## 4.9 Parameter window “Humidity threshold value”

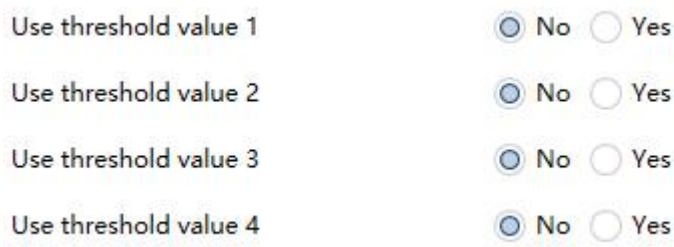



Fig.4.9 Parameter window “Humidity threshold value”

**Parameter “Use threshold value 1/2/3/4”**

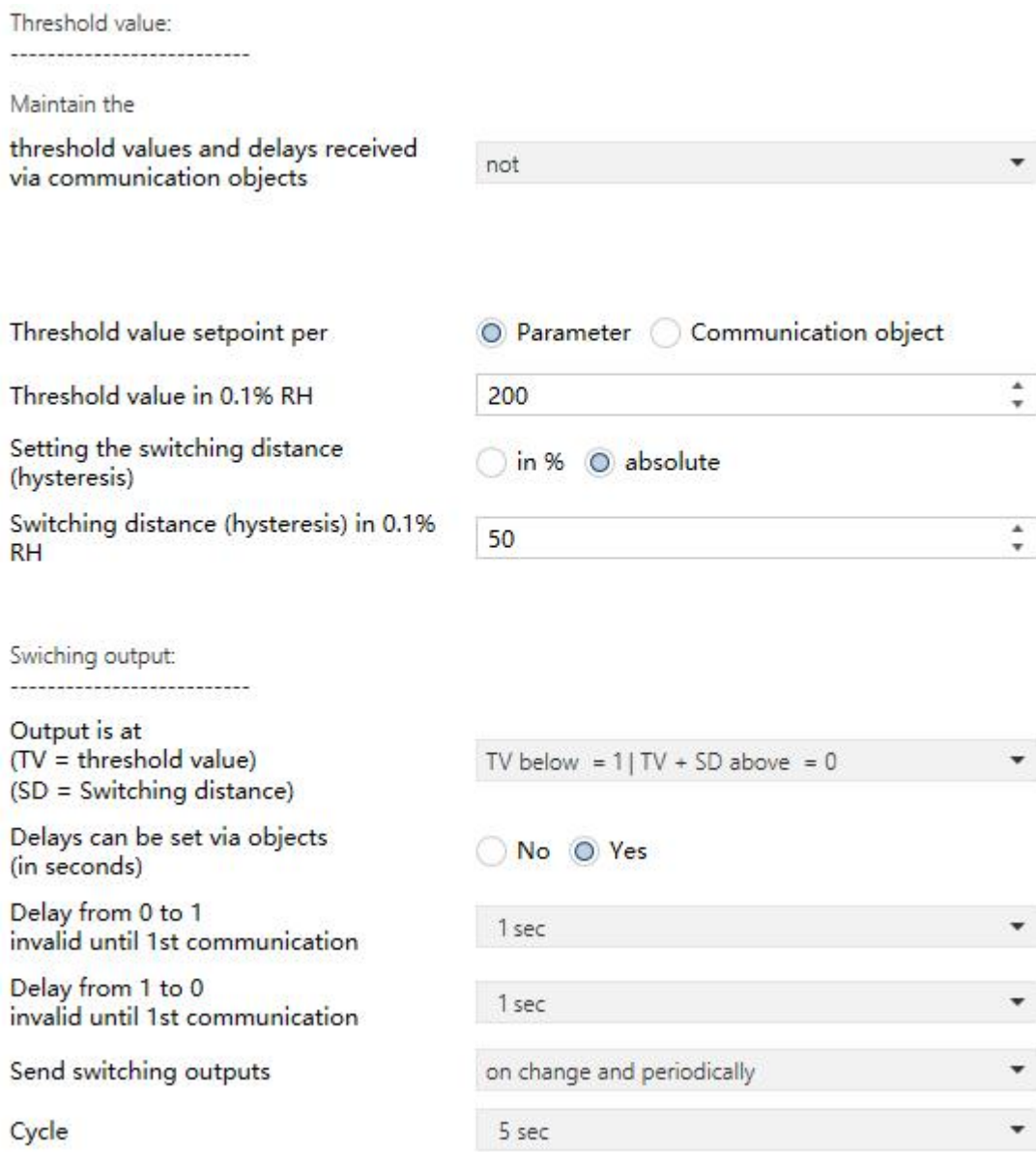
This parameter is used to set whether use air humidity threshold values.

Options:

**No**

**Yes**

### 4.9.1 Parameter window “Threshold value 1/2/3/4”



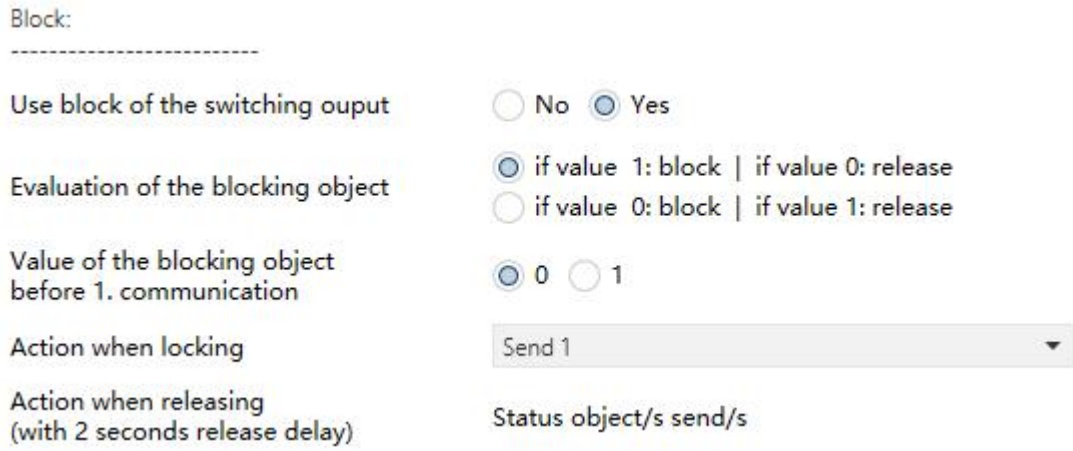



Fig.4.9.1 Parameter window “Threshold value 1/2/3/4”

**Parameter “Threshold value in 0.1% RH”**

Each threshold value can be set individually.

Options: **1...1000**

Other parameter settings are similar to those of the temperature threshold values, see chapter 4.6.1 for detailed operations.

### 4.10 Parameter window “Dew point measured value”

The KNX GPS Weather Station pro calculates the dew point temperature and can output the value to the bus.


Fig.4.10 Parameter window “Dew point measured value”

**Parameter “Transmission behaviour”**

This parameter is used to set the transmission behavior of the dew point measured value.

Options:

**Not**

**Periodically**

**on change**

**on change and periodically**

**——Parameter “Send cycle”**

This parameter is visible when previous parameter is selected “periodically ” , “on change and periodically ” .

When sending periodically, the dew point measured value is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter "On change of"**

This parameter is visible when previous parameter is selected "on change of " , "on change and periodically " .

When sending on change, the dew point measured value sent on the bus as soon as it changes by the value set here.

Options:

**0.1°C**

**0.2°C**

**...**

**2.0°C**

**5.0°C**

**Parameter "Use monitoring of the cooling medium temperature"**

Activate the monitoring of the coolant temperature if required.

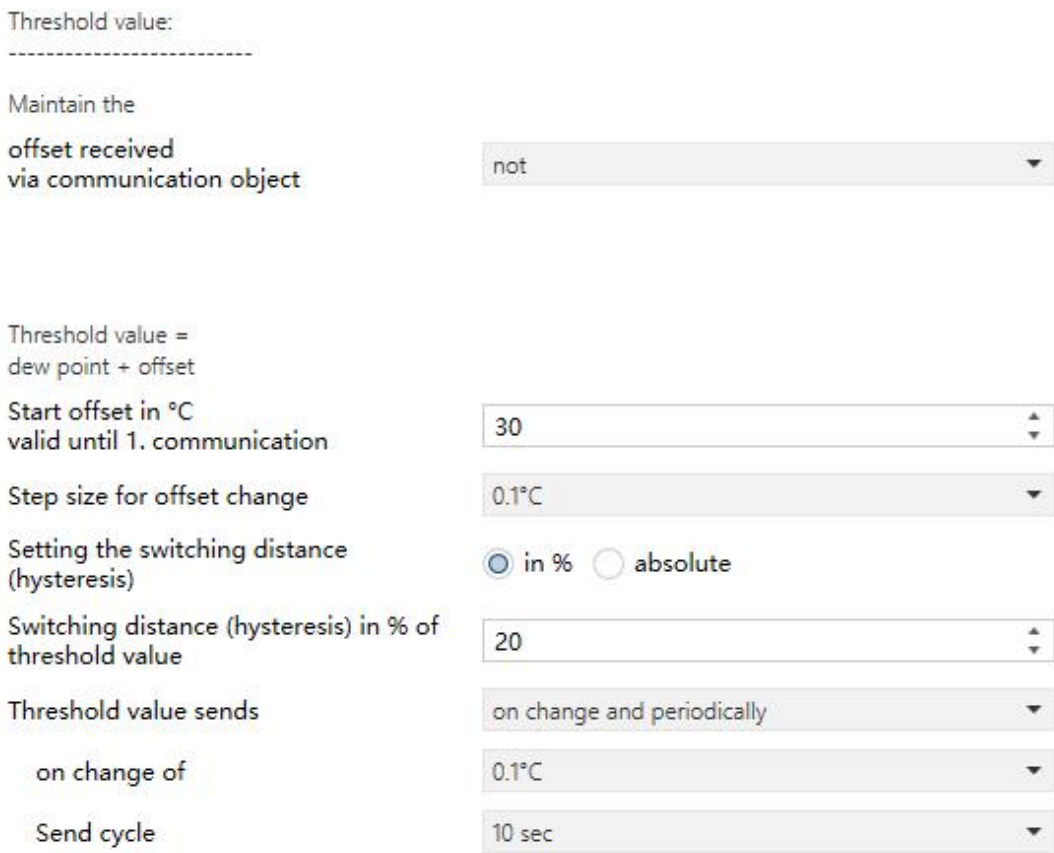
Options:

**No**

**Yes**

### 4.10.1 Parameter window “Cooling medium temp.monitoring”

A threshold value can be set for the temperature of the coolant, which is based on the current dewpoint temperature (offset/deviation). The switching output of the coolant temperature monitoring system can provide a warning prior to any build-up of condensation in the system, and/or activate appropriate countermeasures.



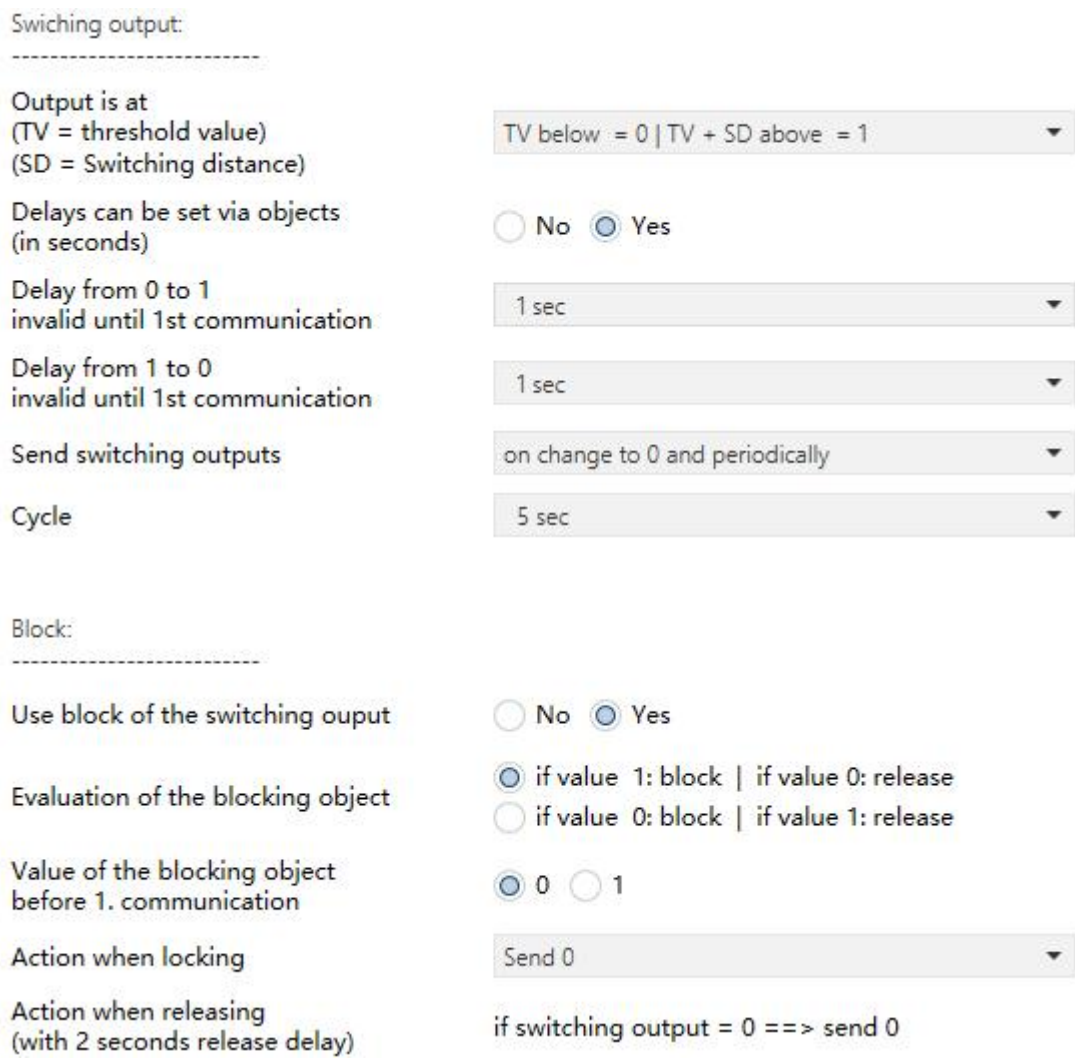



Fig.4.10.1 Parameter window “Cooling medium temp.monitoring”

## Parameter “offset received via communication objects”

Set, in which cases offset received via object is to be retained.

Options:

**Not**

**After power supply restoration**

**After power supply restoration and programming**

**Note: The setting "After power supply restoration and programming" should not be used for the initial start-up, as the factory settings are always used until the first communication (setting via objects is ignored).**

**Threshold value = dewpoint temperature + offset**

**Parameter "Start offset in °C valid until 1.communication"**

During initial commissioning, an offset must be defined which is valid until the first communication of a new offset. For units which have already been taken into service, the last communicated offset can be used.

A set offset will be retained until a new value or a change is transferred. The current value is saved, so that it is retained in the event of a power supply failure and will be available once the power supply is restored.

Options: **0...200**

Other parameter settings are similar to those of the temperature threshold values, see chapter 4.6.1 for detailed operations.

### 4.11 Parameter window “Absolute humidity”

The absolute air humidity value is detected by the KNX GPS Weather pro and can be output to the bus.

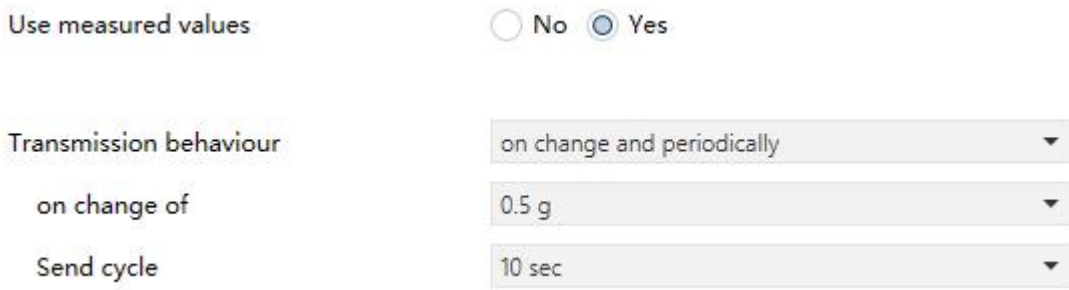



Fig.4.11 Parameter window “Absolute humidity”

**Parameter “Use measured values”**

This parameter is used to set whether use absolute humidity measured values.

Options:

**No**

**Yes**

**Parameter “Transmission behaviour”**

This parameter is used to set the transmission behavior of the absolute humidity.

Options:

**Not**

**Periodically**

**On change**

**On change and periodically**

**——Parameter “Send cycle”**

This parameter is visible when previous parameter is selected “periodically ” and “on change and periodically ” .

When sending periodically, the absolute humidity is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter “On change of”**

This parameter is visible when previous parameter is selected “on change” and “on change and periodically ” .

When sending on change, the absolute humidity sent on the bus as soon as it changes by the value set here.

Options:

**0.1g**

**0.2g**

**...**

**4g**

**5g**

### 4.12 Parameter window “Comfort field”

The KNX GPS Weather Station pro can send a message to the bus if the limits of the comfort field are exceeded. In this way, it is for example possible to monitor compliance with DIN 1946 (standard values) or even to define your own comfort field.

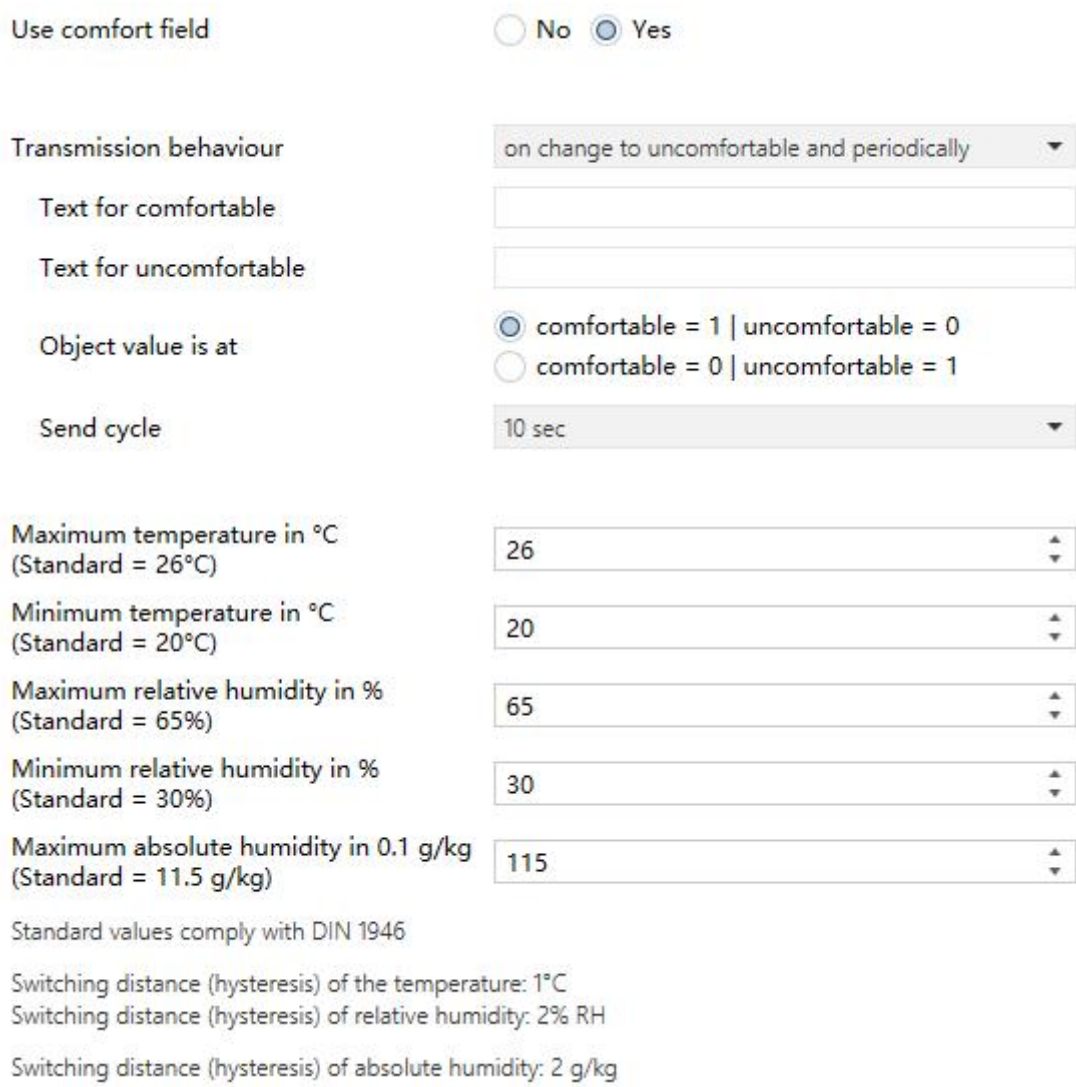



Fig.4.12 Parameter window “Comfort field”

**Parameter “Use comfort field”**

This parameter is used to set whether use comfort field.

Options:

**No**

**Yes**

**Parameters as follow are visible when “Use comfort field” is selected “yes”.**

**Parameter “Transmission behaviour”**

This parameter is used to set the transmission behavior of the comfort field.

Options:

**Not**

**On change**

**On change to comfortable**

**On change to uncomfortable**

**On change and periodically**

**On change to comfortable and periodically**

**On change to uncomfortable and periodically**

**——Parameter “Send cycle”**

This parameter is visible when previous parameter is selected “On change and periodically ”, “On change to comfortable and periodically ” and “On change to uncomfortable and periodically” .

When sending periodically, the comfort field is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter "Text for comfortable"**

**——Parameter "Text for uncomfortable"**

Specify the sending text for comfortable and uncomfortable.

**Parameters as follow are visible when "Transmission behaviour" is no selected "not".**

**——Parameter "Object value is at"**

Specify the sending how the object value should be.

Options:

**Comfortable = 1| uncomfortable = 0**

**Comfortable = 0| uncomfortable = 1**

**Parameter "Maximum temperature in °C(Standard = 26°C)"**

**Parameter "Minimum temperature in °C(Standard = 20°C)"**

**Parameter "Maximum relative humidity in %(Standard = 26°C)"**

**Parameter "Minimum relative humidity in %(Standard = 26°C)"**

**Parameter "Maximum absolute humidity in 0.1 g/kg (Standard = 11.5 g/kg)"**

Define the comfort field by specifying the minimum and maximum values for temperature and humidity. The specified standard values comply with DIN 1946

Options: **25...40**

Options: **10...21**Options: **52...90**

Options: **10...43**

Options: **50...2000**

**Standard values comply with DIN 1946**

**Switching distance (hysteresis) of the temperature: 1°C**

**Switching distance (hysteresis) of relative humidity: 2% RH**

**Switching distance (hysteresis) of absolute humidity: 2 g/kg**

### 4.13 Parameter window “Brightness”

Set the send pattern for the measured brightness. The highest currently measured value of the five internal sensors is used as the brightness value (since this maximum value is the best basis for shading control, the 5 individual sensor values are not output).


Fig.4.13 Parameter window “Brightness”

**Parameter “Transmission behaviour”**

This parameter is used to set the transmission behavior of the brightness value.

Options:

**Not**

**Periodically**

**On change**

**On change and periodically**

**——Parameter “Send cycle”**

This parameter is visible when previous parameter is selected “periodically” and “on change and periodically”.

When sending periodically, the brightness measurement value is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter “at and above change in %”**

This parameter is visible when previous parameter is selected “on change” and “on change and periodically”.

When sending on change, the brightness measurement value sent on the bus as soon as it changes by the value set here.

Options: **1...100**

## 4.14 Parameter window “Brightness threshold values”

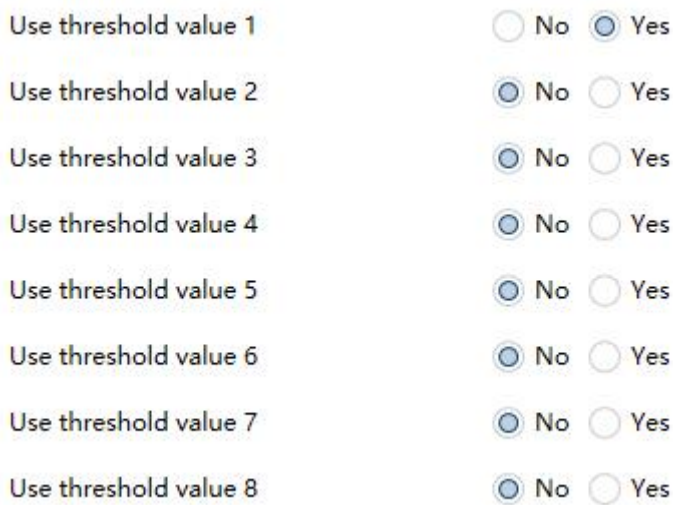



Fig.4.14 Parameter window “Brightness threshold values”

**Parameter “Use threshold value 1/2/3/4”**

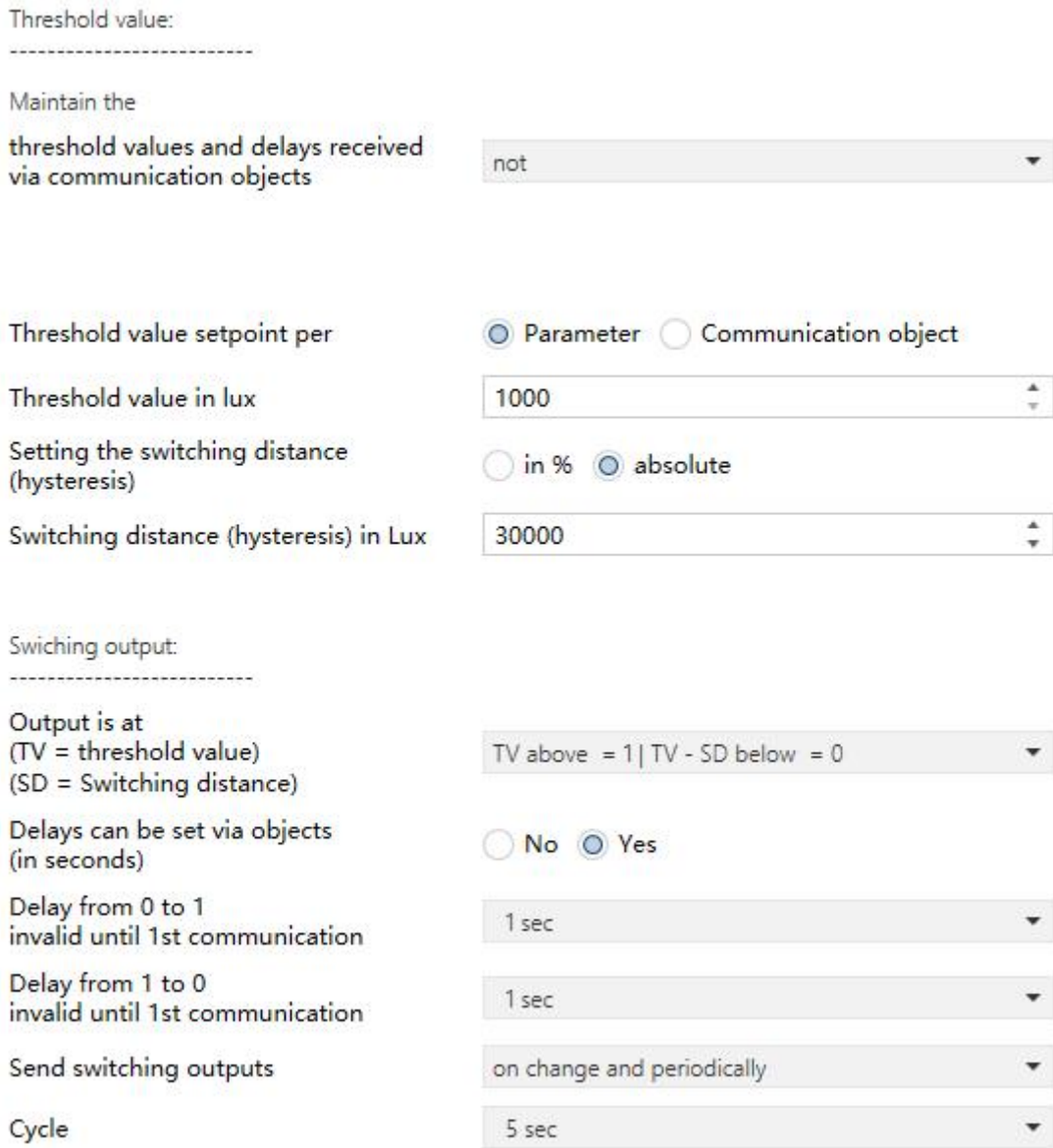
This parameter is used to set whether use brightness threshold values.

Options:

**No**

**Yes**

### 4.14.1 Parameter window “Threshold value 1/.../8”



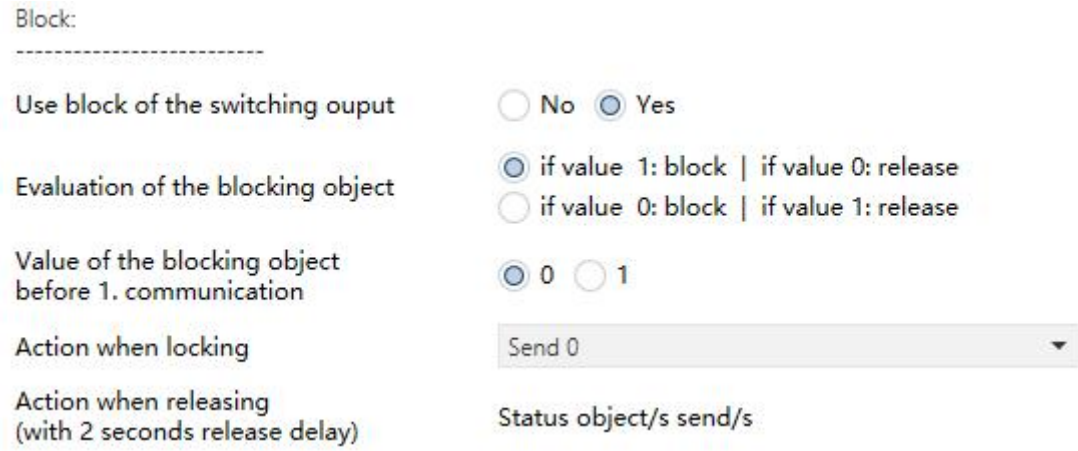



Fig.4.14.1 Parameter window “Threshold value 1/.../8”

**Parameter “Threshold value in lux”**

Each threshold value can be set individually.

Options: **1000...15000**

Other parameter settings are similar to those of the temperature threshold values, see chapter 4.6.1 for detailed operations.

## 4.15 Parameter window “Brightness, TV twilight sensor”


Fig.4.15 Parameter window “Brightness, TV twilight sensor”

**These threshold values refer to the sky sensor.**

**Parameter “Use threshold value 1/2/3/4”**

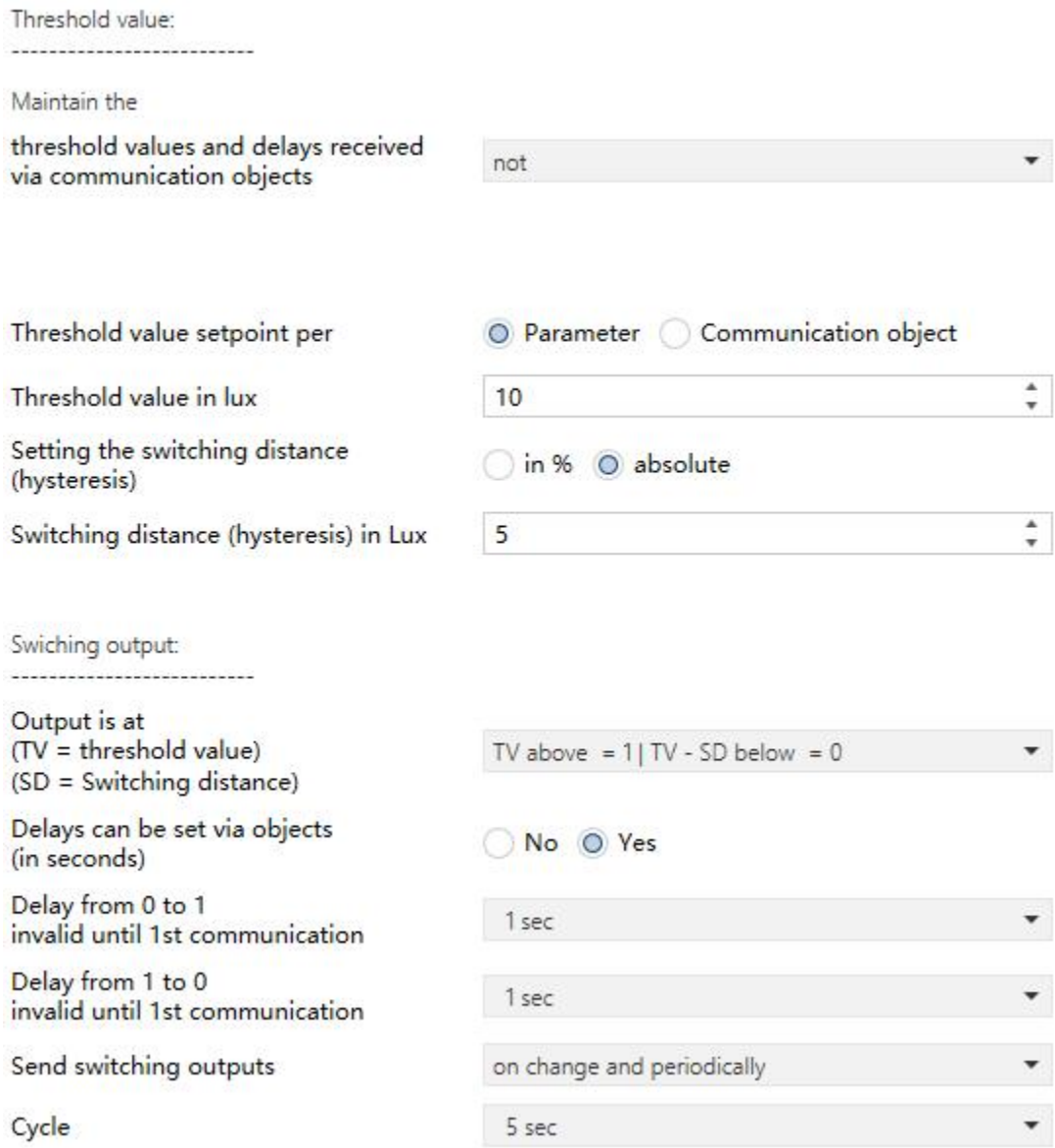
This parameter is used to set whether use twilight brightness threshold value.

Options:

**No**

**Yes**

### 4.15.1 Parameter window “Threshold value 1/2/3/4”



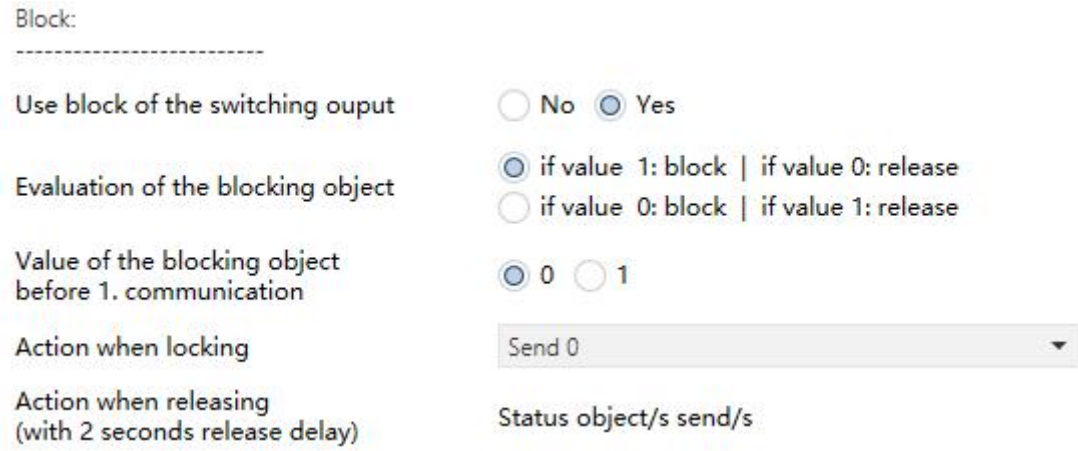



Fig.4.15.1 Parameter window “Threshold value 1/2/3/4”

**Parameter “Threshold value in lux”**

Each threshold value can be set individually.

Options: **1000...15000**

Other parameter settings are similar to those of the temperature threshold values, see chapter 4.6.1 for detailed operations.

## 4.16 Parameter window “Night”

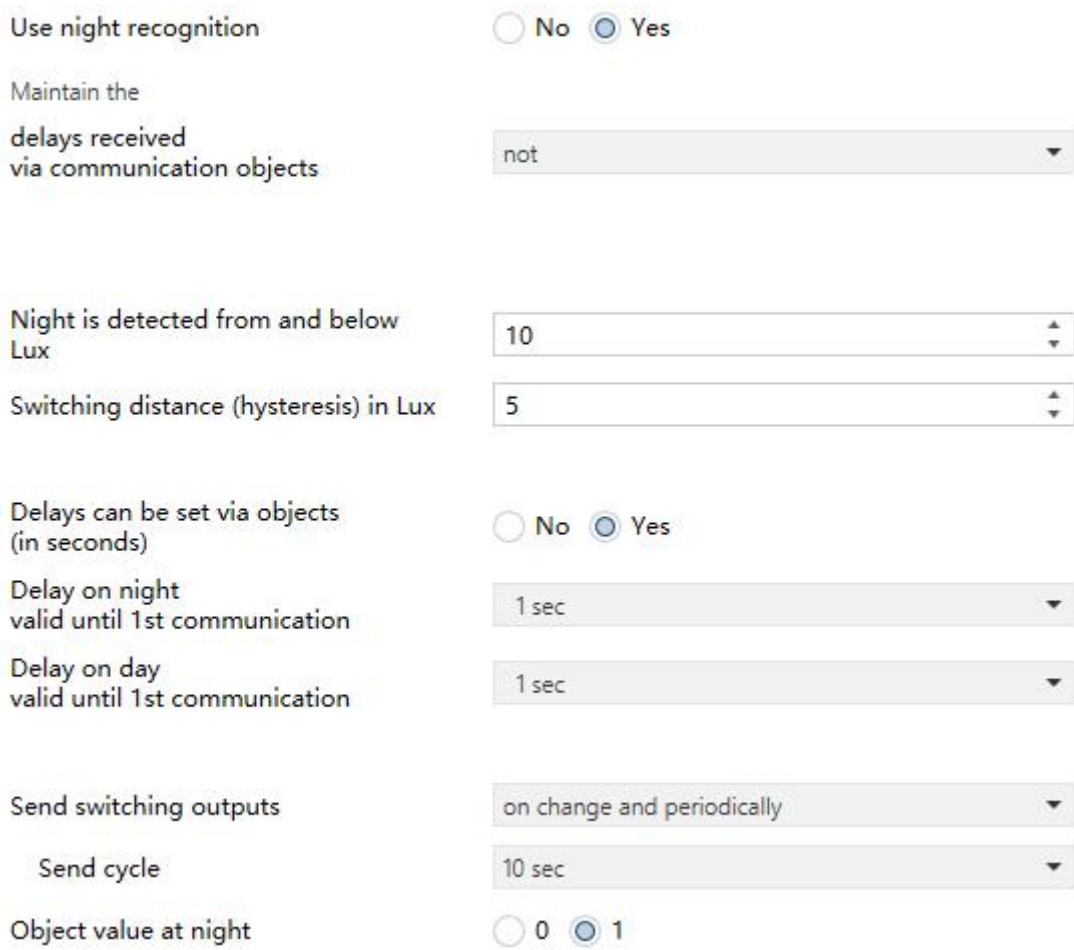



Fig.4.16 Parameter window “Night”

### Parameter “Use night recognition”

This parameter is used to set whether use night recognition.

Options:

**No**

**Yes**

**Parameters as follow are visible when “use night recognition” is selected “yes”.**

**Parameter “Night is detected from and below Lux”**

**Parameter “Switching distance (hysteresis) in Lux”**

Specify below which brightness the device should recognise "night" and with which switching distance this is to be outputted.

Options: **1...1000**

Options: **0...500**

**Parameter “Delays can be set via objects(in seconds)”**

The delay times in seconds can be defined via objects.

Options:

**No**

**Yes**

**——Parameter “Delay on night”**

**——Parameter “Delay on day”**

These parameters are visible when previous parameter is selected “NO”.

Set the delay time for switching night/day.

Options: **none/5 sec/10s/.../1.5h/2h**

**——Parameter “Delay on night valid until 1st communication”**

**——Parameter “Delay on day valid until 1st communication”**

These parameters are visible when previous parameter is selected “yes”.

Set the delay time for switching night/day valid until 1st communication.

Options: **none/5 sec/10s/.../1.5h/2h**

**Parameter “Switching output sends ”**

Here you set when the switching output is to be sent to the bus.

Options:

**on change**

**on change to night**

**on change to day**

**on change and periodically**

**on change to night and periodically**

**on change to day and periodically**

**——Parameter "Send cycle"**

This parameter is visible when previous parameter is selected "on change and periodically " , "on change to night and periodically " and "on change to day and periodically".

When sending periodically, the night switching output is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**Parameter "Object value at night"**

Define the object value at night.

Options:

**0**

**1**

## 4.17 Parameter window “Sun position”

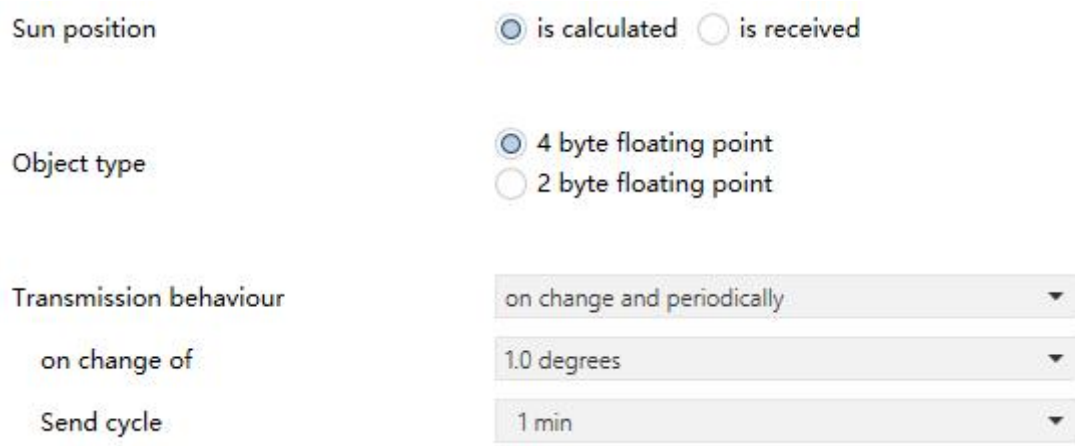



Fig.4.17 Parameter window “Sun position”

**Parameter “Sun position”**

Select whether the device should calculate the sun position itself or if the values are received via the bus.

Options:

**Is calculated**

**Is received**

**Parameter “Object type”**

This parameter is used to set the object type.

Options:

**4 byte floating point**

**2 byte floating point**

**Parameter “Transmission behaviour”**

This parameter is visible when parameter “Sun position” is selected “is received”.

This parameter is used to set the transmission behavior of the sun position.

Options:

**Not**

**Periodically**

**On change**

**On change and periodically**

**——Parameter “Send cycle”**

This parameter is visible when previous parameter is selected “periodically” and “on change and periodically ”.

When sending periodically, the sun position is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter “On change of”**

This parameter is visible when previous parameter is selected “on change” and “on change and periodically ”.

When sending on change, the sun position sent on the bus as soon as it changes by the value set here.

Options:

**0.1 degrees**

**0.2 degrees**

**...**

**5.0 degrees**

### 4.18 Parameter window “Wind measurement”

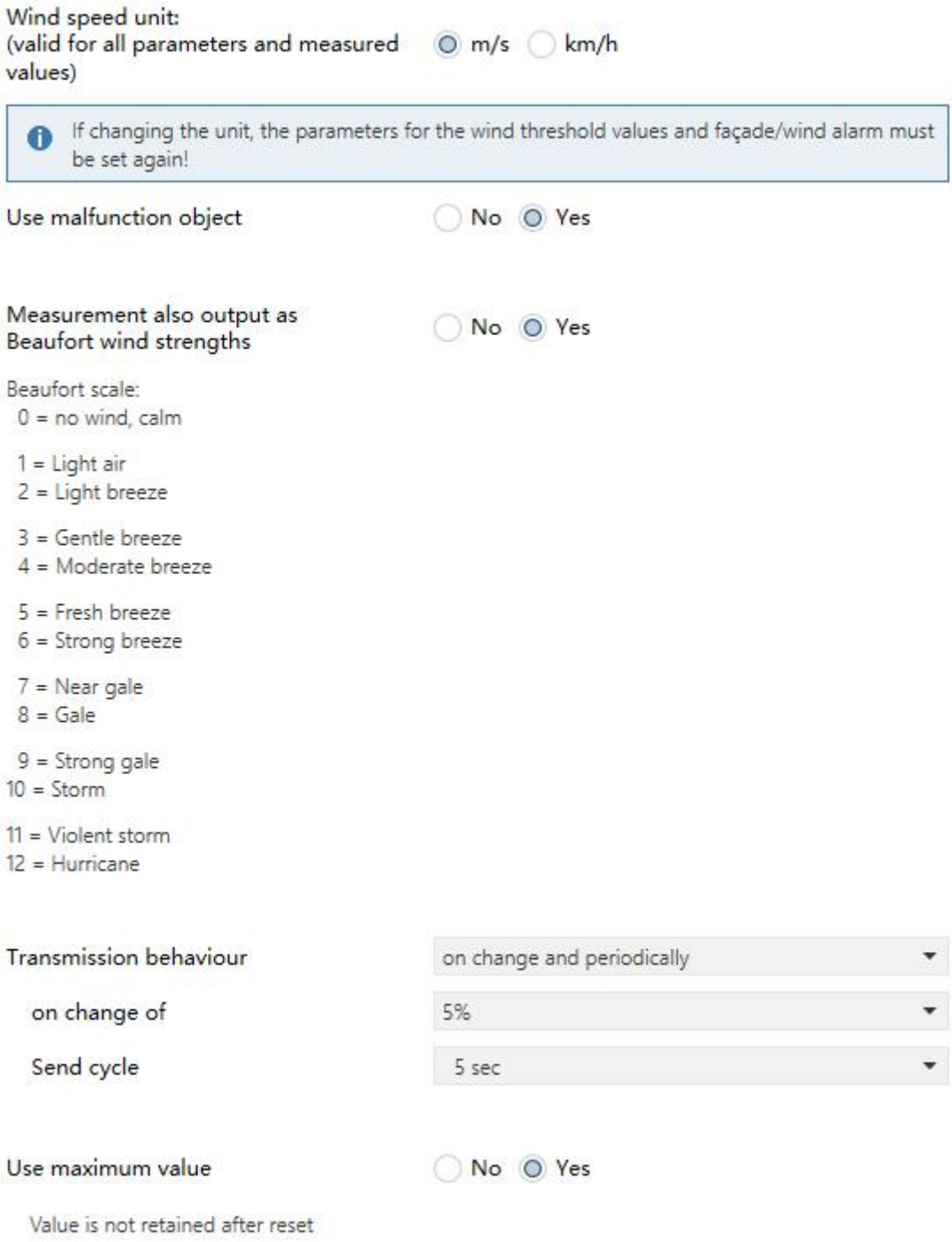



Fig.4.18 Parameter window “Wind measurement”

## Parameter "Wind speed unit: (valid for all parameters and measured values)"

This parameter is used to set the wind speed unit.

Options:

**M/s**

**Km/h**

## Parameter "Use malfunction object"

This parameter is used to set whether use malfunction object.

Options:

**No**

**Yes**

## Parameter "Measurement also output as Beaufort wind strengths"

This parameter is used to set whether measurements are output as beaufort wind strengths.

Options:

**No**

**Yes**

**Beaufort scale:**

**0=no wind,calm**

**1=Light air**

**2=Light breeze**

**3=Gentle breeze**

**4=Moderate Breeze**

**5=Fresh Breeze**

**6=Strong Breeze**

**7=Near gale**

**8=Gale**

**9=Strong gale**

**10=Storm**

**11=Violent storm**

**12=Hurricane**

## Parameter "Transmission behaviour"

This parameter is used to set the transmission behavior of the wind measurement.

Options:

**Not**

**Periodically**

**On change**

**On change and periodically**

**——Parameter "Send cycle"**

This parameter is visible when previous parameter is selected "periodically" and "on change and periodically".

When sending periodically, the wind measurement value is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter “on change of”**

This parameter is visible when previous parameter is selected “on change” and “on change and periodically”.

When sending on change, the wind measurement value is sent on the bus as soon as it changes by the value set here.

Options:

**2%**

**5%**

**...**

**25%**

**50%**

**Parameter “Use maximum values”**

This parameter is used to set whether use maximum values.

Options:

**No**

**Yes**

## 4.19 Parameter window “Wind threshold value”

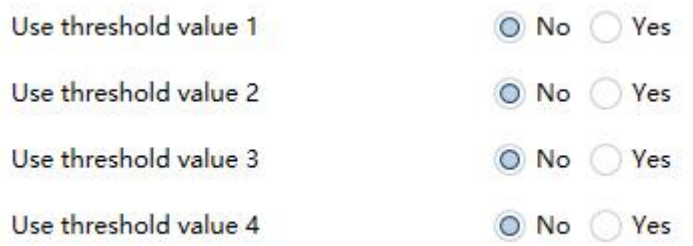



Fig.4.19 Parameter window “Wind threshold value”

**Parameter “Use threshold value 1/2/3/4”**

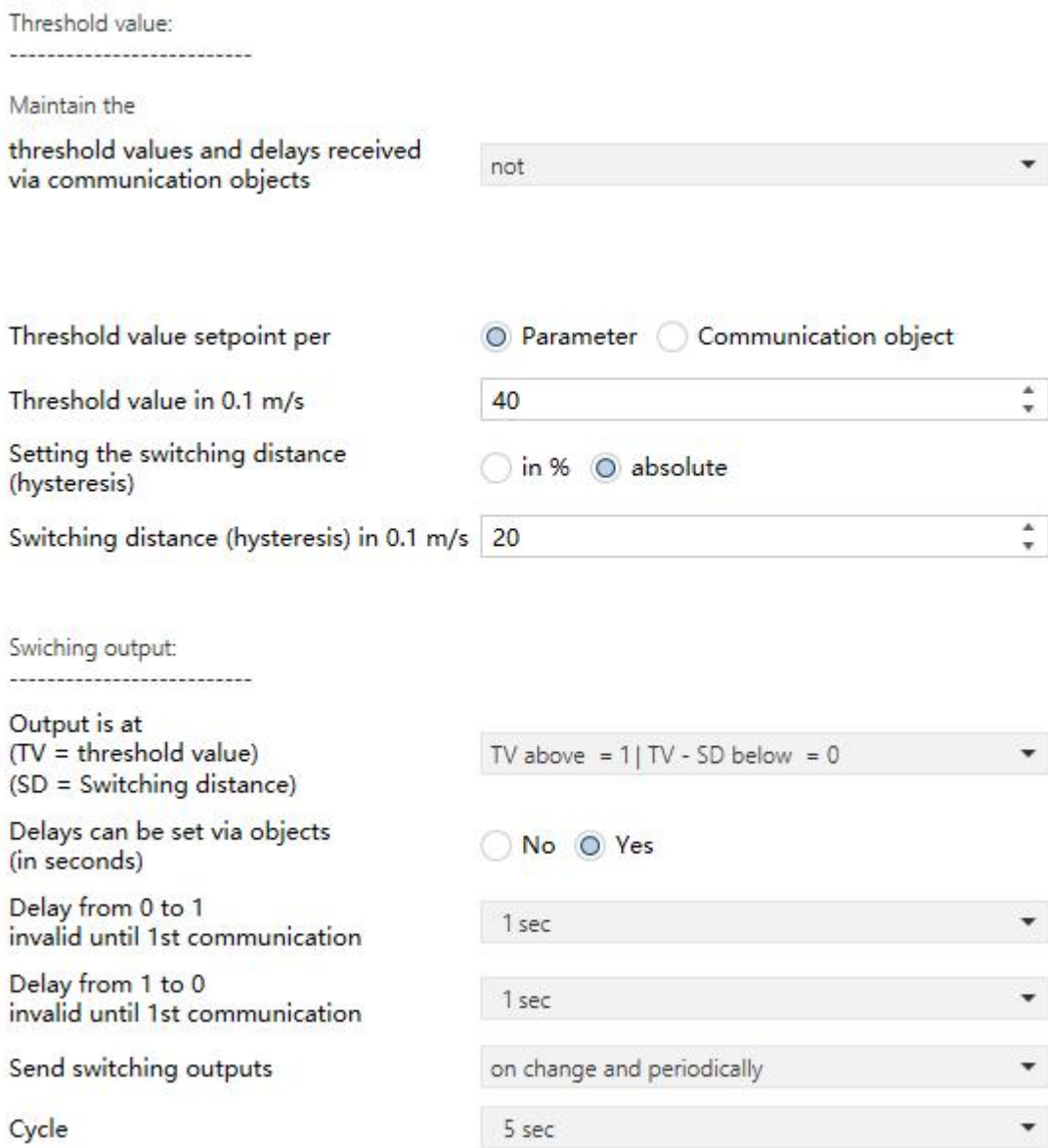
This parameter is used to set whether use wind threshold value.

Options:

**No**

**Yes**

### 4.19.1 Parameter window “Threshold value 1/2/3/4”



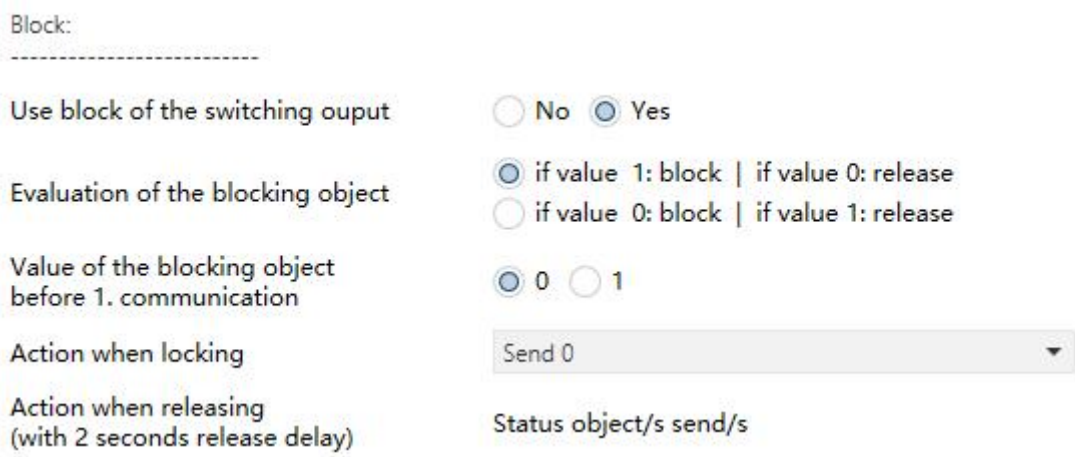



Fig.4.7.1 Parameter window “Wind threshold value 1/2/3/4”

**Parameter “Threshold value in 0.1m/s”**

Each threshold value can be set individually.

Options:**1...350**

Other parameter settings are similar to those of the temperature threshold values, see chapter 4.6.1 for detailed operations.

## 4.20 Parameter window “Wind direction”

Measured value object:

---

| | |
|---|---|
| Send measured value | on change and periodically |
| on change of | 5° |
| Send cycle | 5 sec |
| Send measured value as: | ○ 1 byte object ◉ 4 byte object |

Text object:

---

| | |
|---|---|
| Send wind direction as text | on change and periodically |
| Wind direction Switching distance (hysteresis) | 5° |
| Send cycle: | 5 sec |
| at lower wind speed (v < 0.5 m/s): | Windstille |
| North (0°): | Nord |
| North-East (45°): | Nord-Ost |
| East (90°): | Ost |
| South-East (135°): | Süd-Ost |
| South (180°): | Süd |
| South-West (225°): | Süd-West |
| West (270°): | West |
| North-West (315°): | Nord-West |

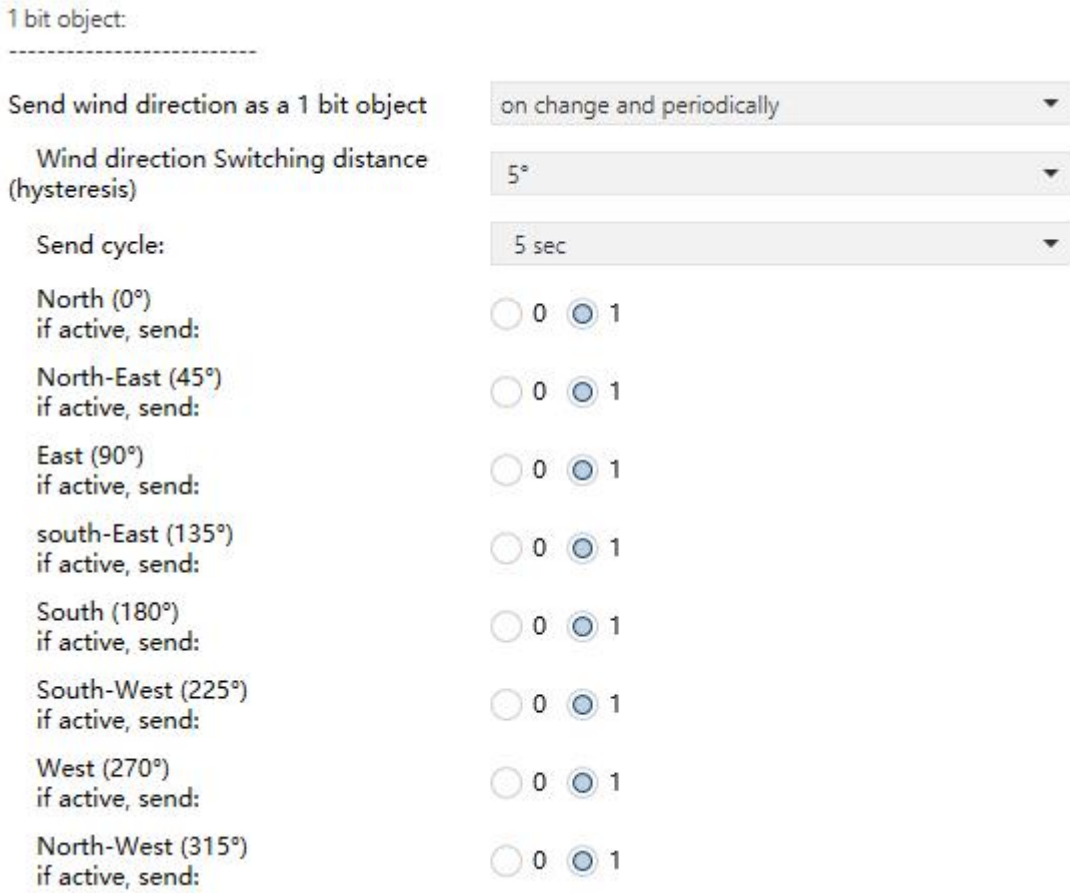



Fig.4.20 Parameter window “Wind direction”

**Measured value object:**

**Parameter “Send measured value”**

This parameter is used to set the transmission behavior of the wind direction measured value.

Options:

**No**

**Periodically**

**On change**

**On change and periodically**

**——Parameter “Send cycle”**

This parameter is visible when previous parameter is selected “periodically” and “on change and periodically”.

When sending periodically, the wind direction measured value is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter “on change of”**

This parameter is visible when previous parameter is selected “on change” and “on change and periodically”.

When sending on change, the wind direction measured value is sent on the bus as soon as it changes by the value set here.

Options:

**2%**

**5%**

**...**

**25%**

**50%**

**——Parameter “send measured value as:”**

This parameter is visible when previous parameter is no selected “no”.

This parameter is used to set the send measured value as 1 byte object or 4 byte object.

Options:

**1 byte object**

**4 byte object**

**Text object:**

**Parameter "Send wind direction as text"**

Specify whether the wind direction should be sent as text.

Options:

**No**

**Periodically**

**On change**

**On change and periodically**

**——Parameter "Send cycle"**

This parameter is visible when previous parameter is selected "periodically" and "on change and periodically".

When sending periodically, the wind direction measure value is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter "Wind direction switching distance (hysteresis)"**

This parameter is visible when previous parameter is selected "on change" and "on change and periodically".

When sending on change, the wind direction switching distance sent on the bus as soon as it changes by the value set here.

Options:

**0°**

**1°**

**...**

**16°**

**20°**

**Parameter "at lower wind speed (v<0.5 m/s)"**

**Parameter "North (0°)"**

**Parameter "North-East(45°)"**

**Parameter "East(90°)"**

**Parameter "South-East(135°)"**

**Parameter "South(180°)"**

**Parameter "South-West(225°)"**

**Parameter "West(270°)"**

**Parameter "North-West(315°)"**

This parameter customizes the text description of the wind direction sent to the bus.

**1 bit object:**

**Parameter "Send wind direction as a 1 bit object"**

Specify whether the wind direction is to be sent as a 1 bit object.

Options:

**No**

**Periodically**

**On change**

**On change and periodically**

**——Parameter “Send cycle”**

This parameter is visible when previous parameter is selected “periodically” and “on change and periodically”.

When sending periodically, the wind direction measure value is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter “Wind direction switching distance (hysteresis)”**

This parameter is visible when previous parameter is selected “on change” and “on change and periodically”.

When sending on change, the wind direction switching distance sent on the bus as soon as it changes by the value set here.

Options:

**0°**

**1°**

**...**

**16°**

**20°**

**Parameter "North (0°) if active,send:"**

**Parameter "North-East(45°) if active,send:"**

**Parameter "East(90°) if active,send:"**

**Parameter "South-East(135°) if active,send:"**

**Parameter "South(180°) if active,send:"**

**Parameter "South-West(225°) if active,send:"**

**Parameter "West(270°) if active,send:"**

**Parameter "North-West(315°) if active,send:"**

This parameter customizes the text description of the wind direction sent to the bus.

Options:

**0**

**1**

## 4.21 Parameter window “Wind direction ranges”


### Parameter “Use range 1/2/3”

This parameter is used to set whether use wind direction ranges.

Options:

**No**

**Yes**

### 4.21.1 Parameter window “Range 1/2/3/4”

Wind direction angle range:
---

Maintain the

ranges and delays received via communication objects: not

Reported data indication for: Parameter / Communication object

Angle range

from: 0

to: 0

Output is “one” if the value is within range.

Switching distance (hysteresis): 5°

Output is “zero” if the value is outside the range, incl. switching distance (hysteresis) (from - SD to + SD).

Swiching output:
---

Delay can be set via objects (in seconds): No / Yes

Delay from 0 to 1 valid until 1st communication: 1 sec

Delay from 1 to 0 valid until 1st communication: 1 sec

Send switching outputs: on change and periodically

Cycle: 5 sec

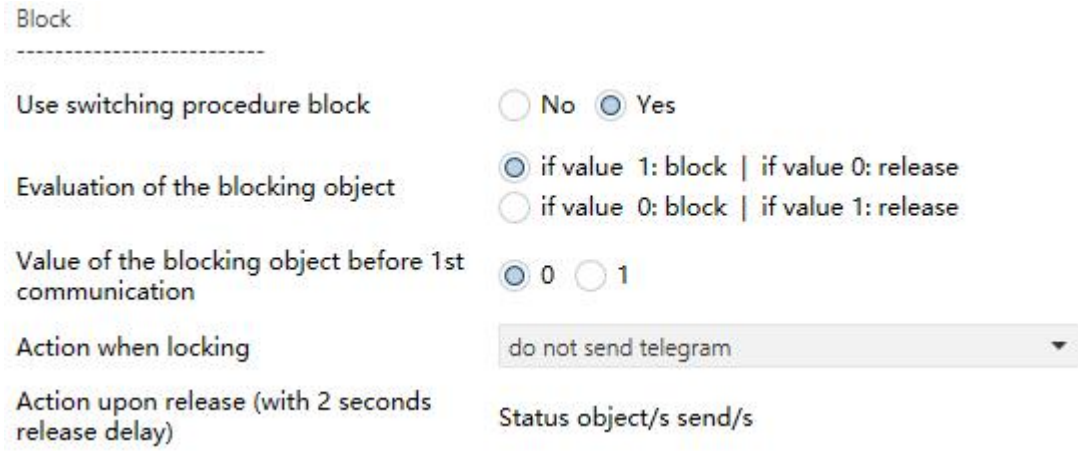



Fig.4.21.1 Parameter window “Range 1/2/3/4”

**Wind direction angle range:**

**Maintain the**

**Parameter "Ranges and delays received via communication objects"**

Set, in which cases ranges and delay times received are to be kept per object. The parameter is only taken into consideration if the specification/ setting by object is activated further down.

Options:

**Not**

**After power supply restoration**

**After power supply restoration and programming**

**Note: The setting "After power restoration and programming" should not be used for the initial start-up, as the factory settings are always used until the first call (setting via objects is ignored).**

**Parameter "Reported data indication for"**

Select whether the range is to be specified per parameter or via a communication object.

Options:

**Parameter**

**Communication object**

## Parameter "Switching distance (hysteresis)"

This parameter is used to set the switching distance.

Options:

**0°**

**5°**

**...**

**16°**

**20°**

**These parameter is visible when "reported data indication for" is selected "Parameter" .**

**Angel range**

**——Parameter "from:"**

**——Parameter "to:"**

When the angle range per parameter is specified, then the value is set.

Options: **0...359**

**These parameter is visible when "Threshold value setpoint per" is selected "Communication object" .**

**——Parameter "Type of threshold change"**

This parameter is used to set the type of threshold change.

Options:

**Absolute value**

**Increment/decrement**

**——Parameter "Step size"**

This parameters are visible when previous parameter is selected "Increment/decrement".

This parameter is used to set the increment/decrement step size.

Options:

**1°**

**2°**

**...**

**20°**

**30°**

Other parameter settings are similar to those of the temperature threshold values, see chapter 4.6.1 for detailed operations.

## 4.22 Parameter window “Pressure measured value”

Air pressure unit: Pa
(1 Pa = 0.01 hPa = 0.01 mbar)

Normal air pressure:
at sea level, temperature-compensated

Barometric pressure:
direct sensor measurement

Typical normal air pressure values:

up to 98,000 Pa: Pressure is very low
==> Weather is stormy

98,000...100,000 Pa: Pressure is low
==> Weather is rainy

100,000...102,000 Pa: Pressure is normal
==> Weather is changeable

102,000...104,000 Pa: Pressure is high
==> Weather is sunny

at and above 104,000 Pa: Pressure is very high==> Weather is very dry

| | |
|---|---|
| Use malfunction object | ○ No ◉ Yes |
| Measurement also output as barometric pressure | ○ No ◉ Yes |
| Transmit behaviour measurement | on change and periodically |
| on change of | 10 Pa |
| Send cycle | 1 min |
| Use minimum and maximum value | ○ No ◉ Yes |

Values are not maintained
after reset

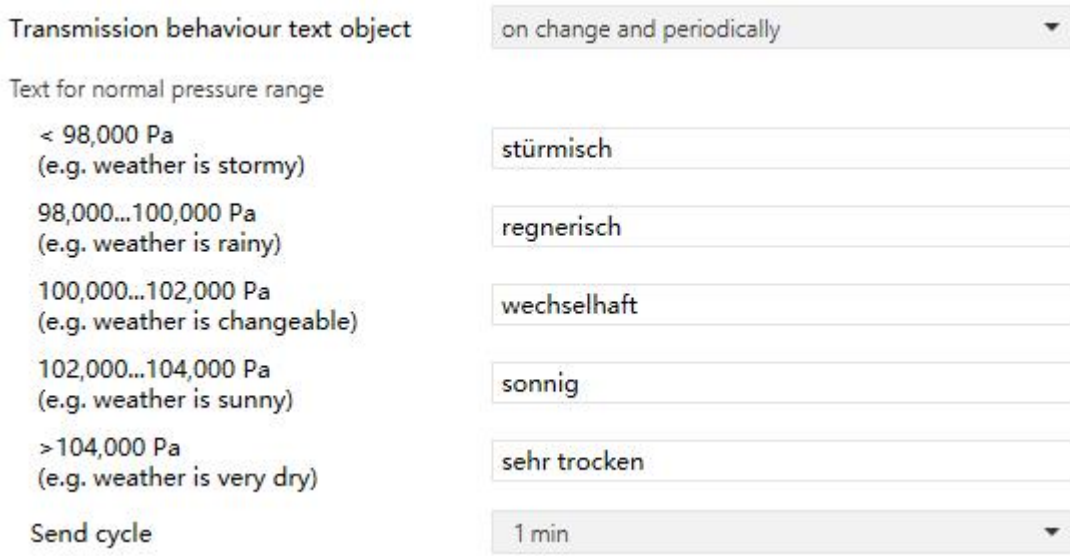



Fig.4.22 Parameter window “Pressure measured value”

**Air pressure unit: Pa**

**(1 Pa=0.01hPa=0.01mbar)**

**Normal air pressure:**

**At sea level, temperature-compensated**

**Barometric pressure:**

**Direct sensor measurement**

**Typical normal air pressure values:**

**Up to 98,000 Pa:Pressure is very low**

**==>Weather is rainy**

**100,000...102,000 Pa:Pressure is high**

**==>Weather is changeable**

**102,000...104,000 Pa:Pressure is high**

**==>Weather is sunny**

**At and above 104,000 Pa:pressure is bery**

**high==>Weather is very dry**

**Parameter "Use malfunction object"**

This parameter is used to set whether use malfunction object.

Options:

**No**

**Yes**

**Parameter "Measurement also output as barometric pressure"**

Specify whether the measured value is, in addition, to be outputted as barometric pressure (see below Information on air pressure).

Options:

**No**

**Yes**

**Parameter "Transmit behaviour measurement"**

This parameter is used to set the transmission behavior of the pressure measured value sent to the bus.

Options:

**No**

**Periodically**

**On change**

**On change and periodically**

**——Parameter "Send cycle"**

This parameter is visible when previous parameter is selected "periodically" and "on change and periodically".

When sending periodically, the pressure measured value is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter “on change of”**

This parameter is visible when previous parameter is selected “on change” and “on change and periodically”.

When sending on change, the pressure measured value is sent on the bus as soon as it changes by the value set here.

Options:

**10Pa**

**20Pa**

**...**

**200Pa**

**500Pa**

**Parameter “Use minimum and maximum value”**

This parameter is used to set whether use minimum and maximum value.

Options:

**No**

**Yes**

**Values are not maintained after reset**

**Parameter “Transmission behaviour text object”**

Specify whether the pressure measured value should be sent as text.

Options:

**No**

**Periodically**

**On change**

**On change and periodically**

**Text for normal pressure range**

Parameter "<98,000 Pa (e.g. weather is stormy)"

Parameter "<98,000 ... 1000.000 Pa (e.g. weather is rainy)"

Parameter "100.000...102.000 Pa (e.g.weather is changeable)"

Parameter "102,000...104,000 Pa (e.g. weather is sunny)"

Parameter ">104,000 Pa (e.g. weather is bety dry)"

This parameter customizes the text description of the wind direction sent to the bus.

**——Parameter "Send cycle"**

This parameter is visible when parameter "Transmission behaviour text object" is selected "periodically" and "on change and periodically".

When sending periodically, the pressure measure value is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

## 4.23 Parameter window “Pressure threshold values”


Fig.4.9 Parameter window “Pressure threshold values”

**Parameter “Use threshold value 1/2/3/4”**

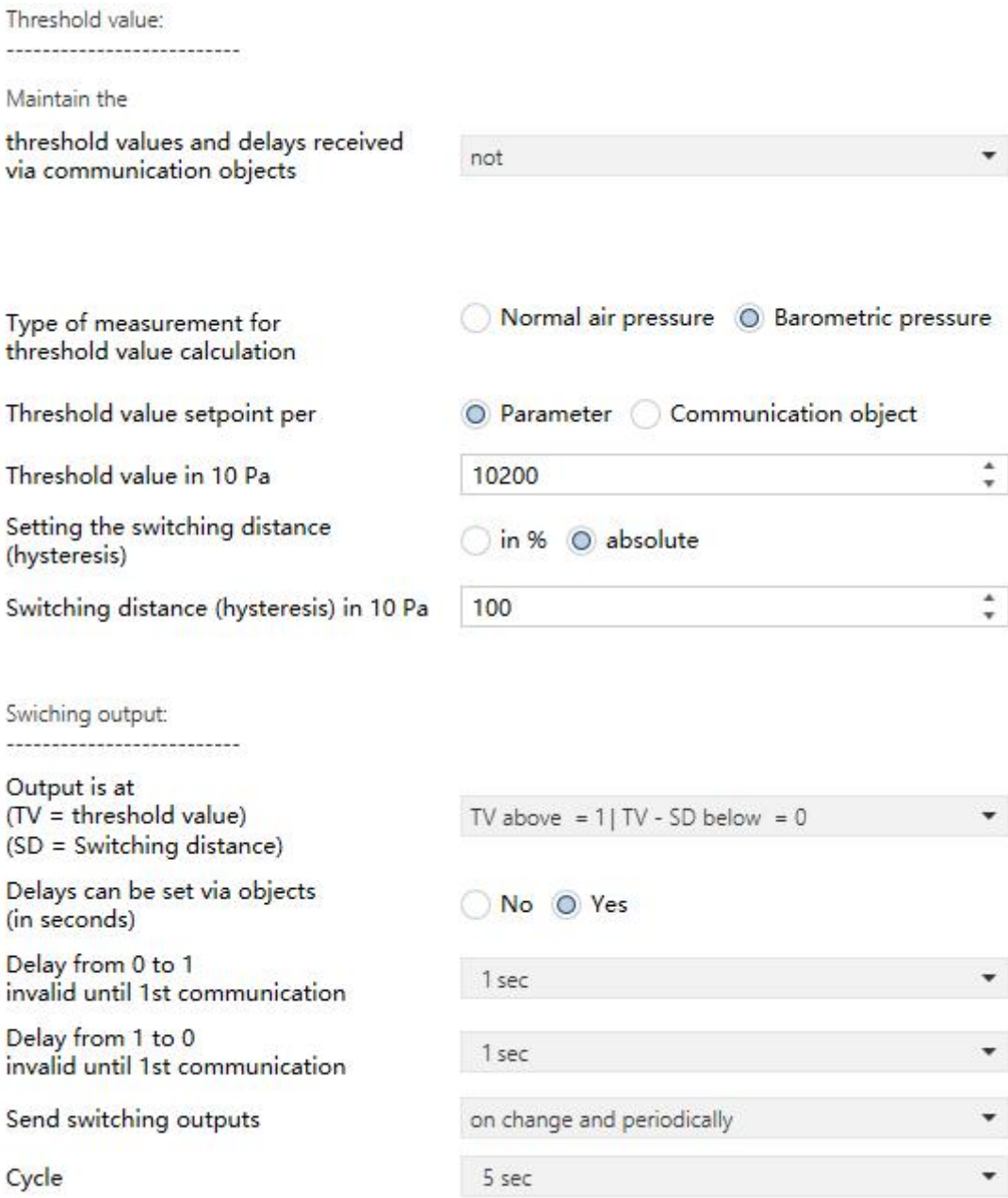
This parameter is used to set whether use pressure threshold value.

Options:

**No**

**Yes**

### 4.23.1 Parameter window “Threshold value 1/2/3/4”



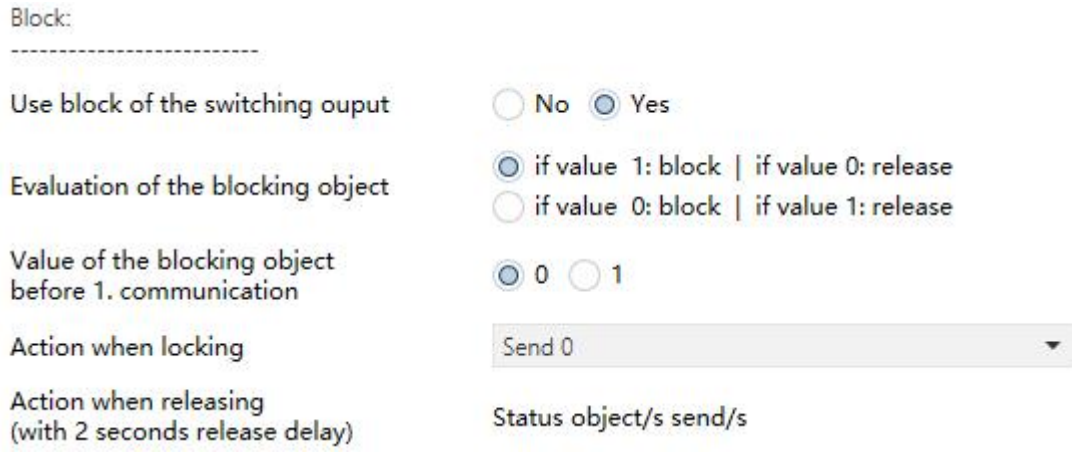



Fig.4.9 Parameter window “Threshold value 1/2/3/4”

**Parameter “Type of measurement for threshold value calculation”**

This parameter is used to set the type of measurement for threshold value calculation.

Options:

**Normal air pressure**

**Barometric pressure**

**Parameter “Threshold value in 10Pa”**

Each threshold value can be set individually.

Options: **3000...11000**

Other parameter settings are similar to those of the temperature threshold values, see chapter 4.6.1 for detailed operations.

### 4.24 Parameter window “Summer compensation”

With the summer compensation the target value for the room temperature can automatically be adapted by cooling at higher outdoor temperatures. The objective is to prevent a too great a difference between indoor and outdoor temperature in order to keep the energy consumption low.

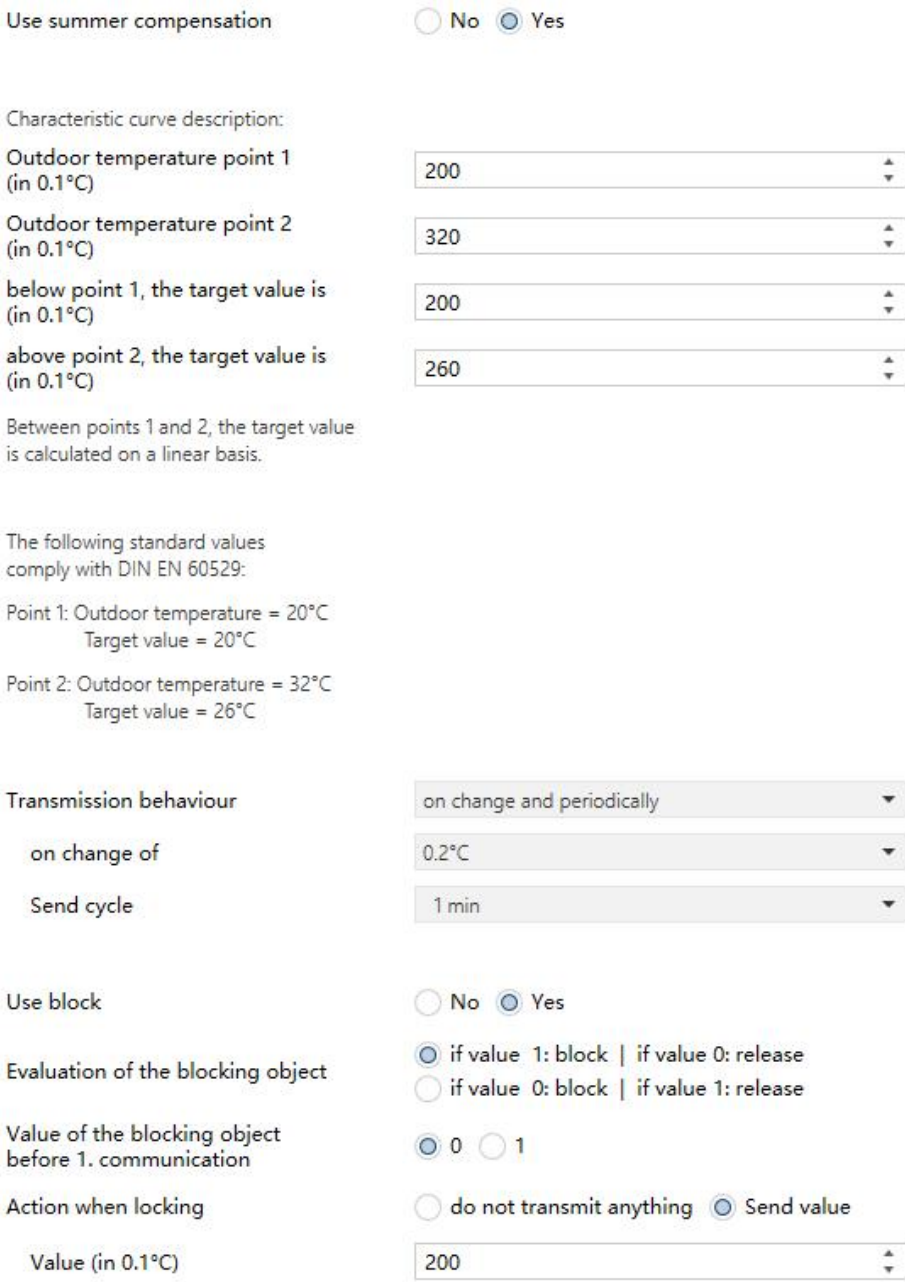



Fig.4.24 Parameter window “Summer compensation”

**Parameter "Use summer compensation"**

This parameter is used to set whether use summer compensation.

Options:

**No**

**Yes**

**Parameters as follow are visible when "use summer compensation" is selected "yes".**

**Characteristic curve description:**

**Parameter "Outdoor temperature point 1(in 0.1°C)"**

**Parameter "Outdoor temperature point 2(in 0.1°C)"**

**Parameter "below point 1, the target value is(in 0.1°C)"**

**Parameter "above point 2, the target value is(in 0.1°C)"**

Using the points 1 and 2, define the outdoor temperature range in which the target value for the indoor temperature is to be adapted linearly. Then, specify which indoor temperature target values are to be valid below point1 and above point 2.

Options: **0...500**

**Between points 1 and 2, the target value is calculated on a linear basis.**

**The following standard values**

**Comply with DIN EN 60529:**

**Point 1: Outdoor temperature = 20℃**

**Target value = 20℃**

**Point 2: Outdoor temperature = 32℃**

**Target value = 26℃**

## Parameter "Transmit behaviour"

This parameter is used to set the transmission behavior of the summer compensation value.

Options:

**Periodically**

**On change**

**On change and periodically**

**——Parameter "Send cycle"**

This parameter is visible when previous parameter is selected "periodically" and "on change and periodically".

When sending periodically, the summer compensation value is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10s**

**...**

**1.5h**

**2h**

**——Parameter "on change of"**

This parameter is visible when previous parameter is selected "on change" and "on change and periodically".

When sending on change, the summer compensation value is sent on the bus as soon as it changes by the value set here.

Options:

**0.1℃**

**0.2℃**

**...**

**2.0°C**

**5.0°C**

### Parameter "Use block"

This parameter is used to set whether activate the block for the summer compensation.

Options:

**No**

**Yes**

## Parameters as follow are visible when "use block" is selected "yes".

### Parameter "Evaluation of the blocking object"

This parameter is used to set what a 1 or 0 at the block entry means.

Options:

**If value 1:block | if value 0: release**

**If value 0:block | if value 1: release**

### Parameter "Value of the blocking object before 1.communication"

An object value up to the 1st communication is specified here.

Options:

**0**

**1**

### Parameter "Action when locking"

This parameter is used to set the action when locking.

Options:

**Do not transmit anything**

**Send value**

**——Parameter “Value (in 0.1℃)”**

This parameter is visible when previous parameter is selected “send value”.

This parameter is used to set the value to be sent when locking.

Options: **0...500**

### 4.25 Parameter window “Facades”

If necessary, activate the facade controller (shading controller). When the facade controller is activated, the objects for the simulation of various parameter settings can also be activated. For this simulation, with the exception of a retraction delay (10 seconds),no time functions (delay times etc.) are used. Please observe the instructions for the simulation in chapter 4.25.1.7 Simulation.

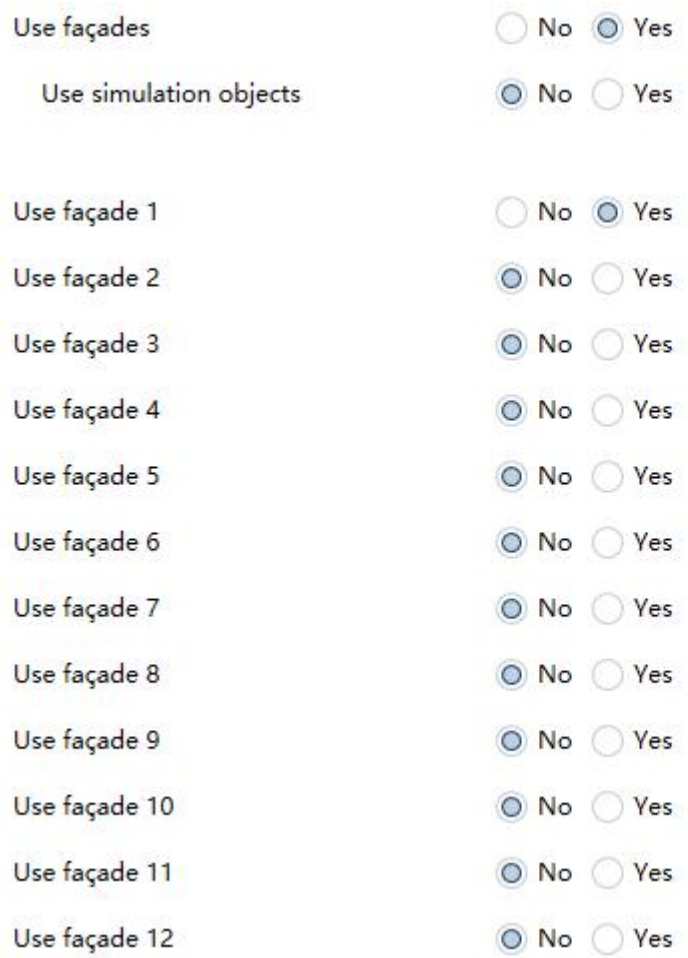



Fig.4.25(1)

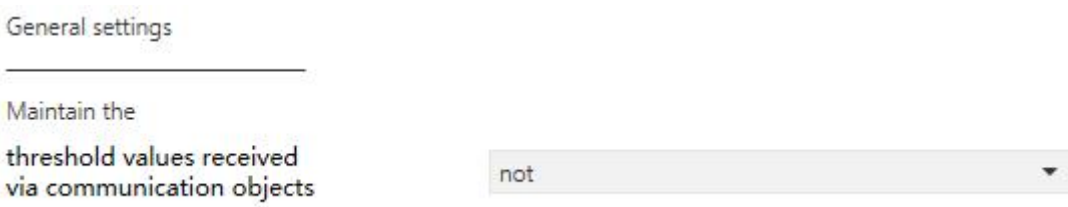


Fig.4.25(2)Facades_General settings


Fig.4.25(3)Facades_Live monitoring

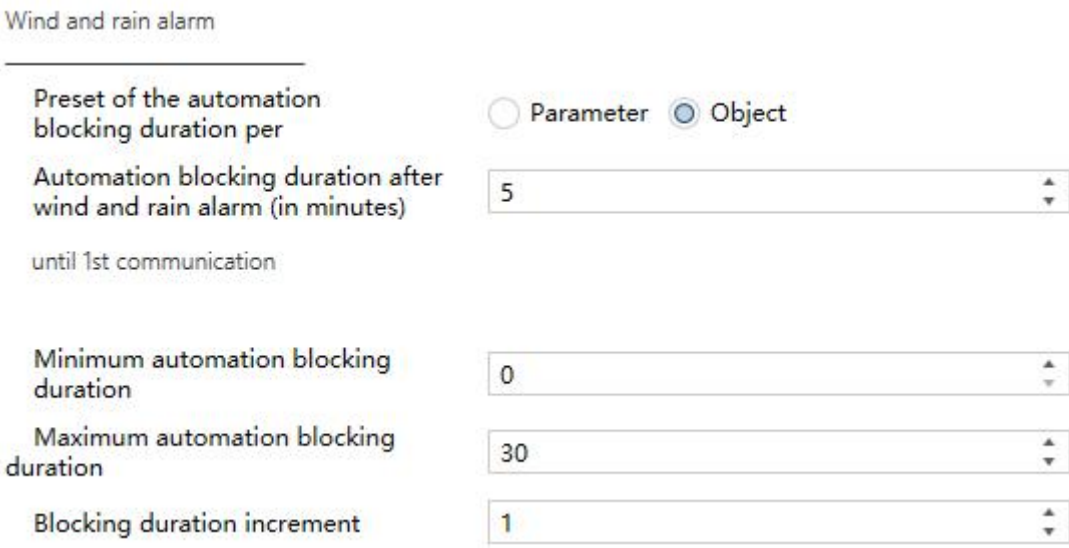



Fig.4.25(4)Facades_Wind and rain alarm

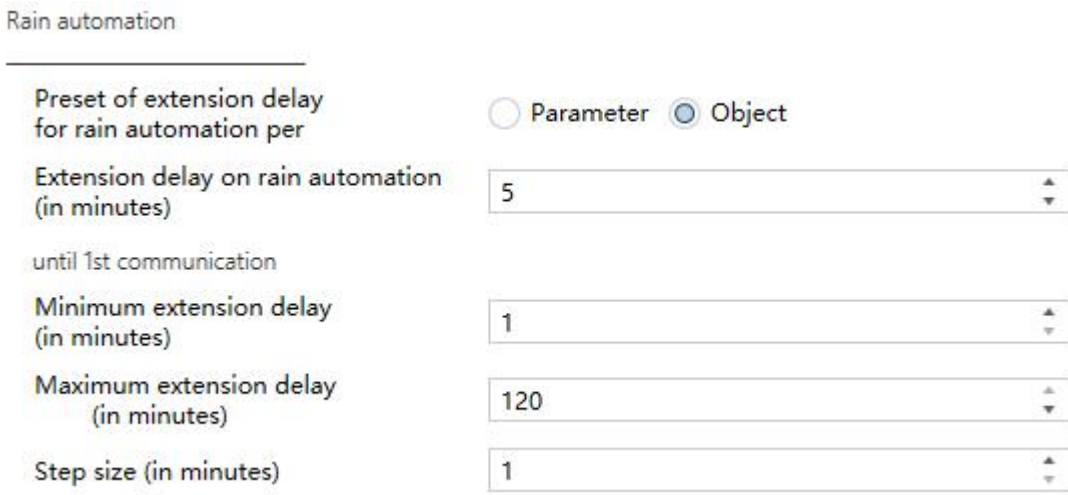



Fig.4.25(5)Facades_Rain automation

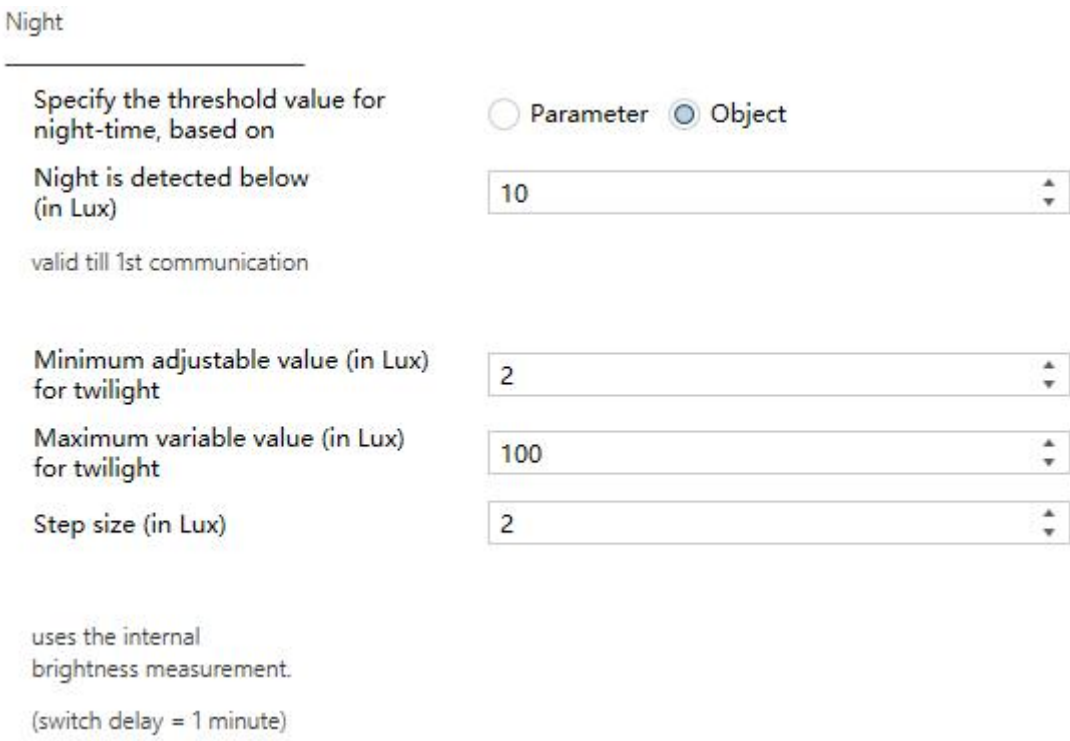



Fig.4.25(6)Facades_Night

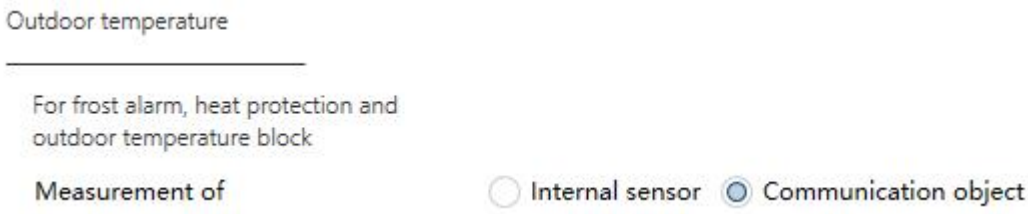



Fig.4.25(7)Facades_Outdoor temperature

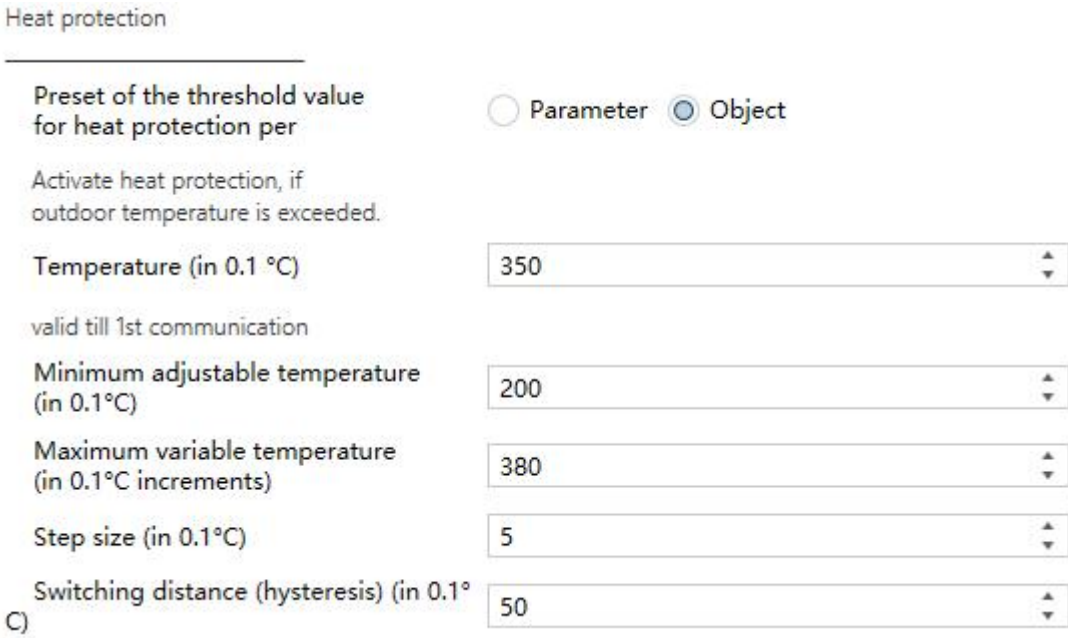



Fig.4.25(8)Facades_Heat protection

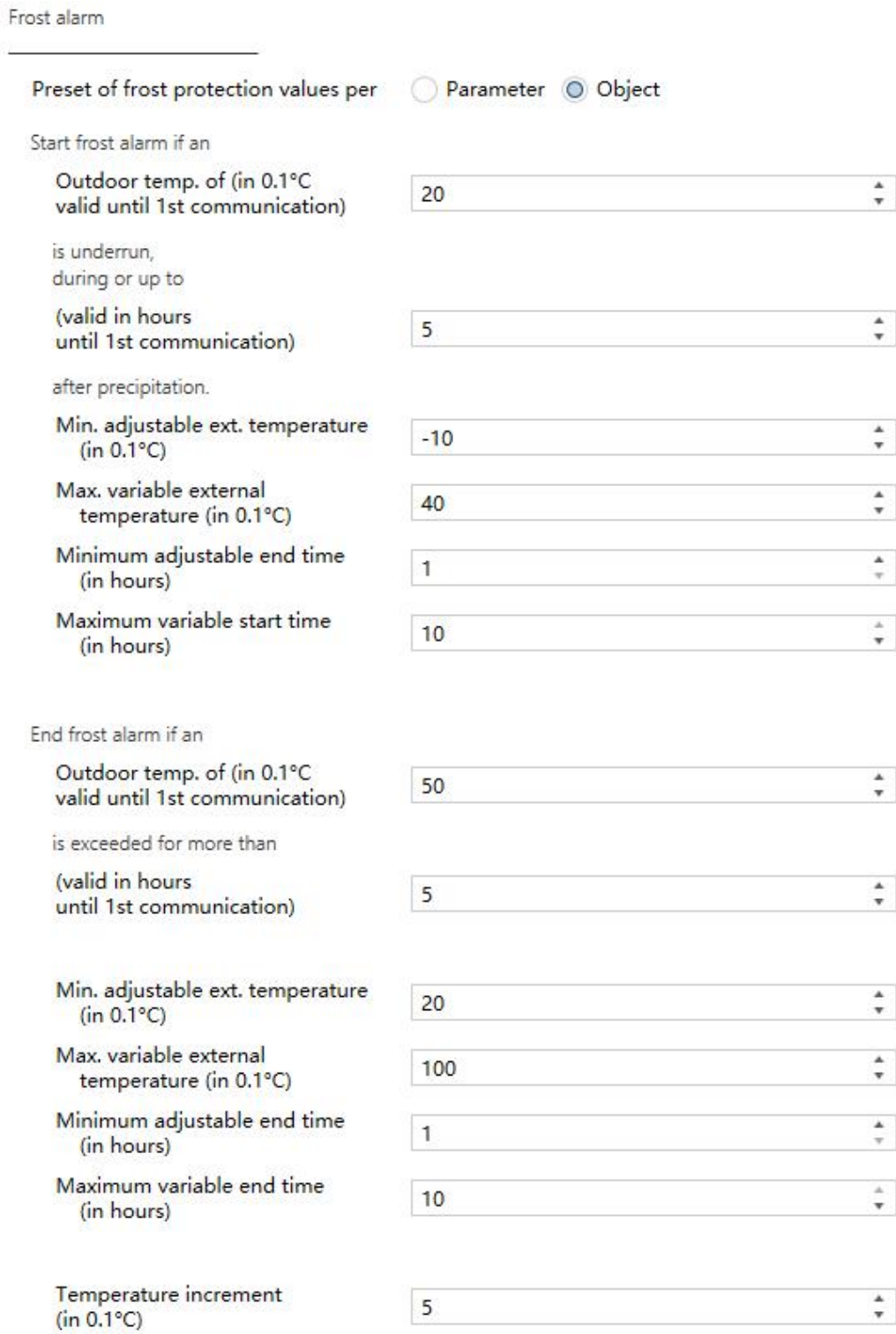



Fig.4.25(9)Facades_Frost alarm


Fig.4.25(10)Facades_Facades status output


Fig.4.25(11)Facades_Text that are output with object”Facade X channel state text”

Texts that are output with object "Façade X channel status bit text"

| | |
|---|---|
| Block automation using communication object | Auto. Sperre |
| Wind extension block status | Windausfahrsp. |
| Wind alarm status | Windalarm |
| Rain alarm status | Regenalarm |
| Rain automation status | Regenautomatik |
| Frost alarm status | Frostalarm |
| Safety status | Sicherheit |
| Time open status | Zeitöffnen |
| Outdoor temperature block status | A-temp Sperre |
| Night closure status | Nachtschließen |
| Timed closure status | Zeitschließen |
| Heat protection status | Hitzeschutz |
| Pyranometer status | Pyranometer |
| Indoor temperature blocking status | I-Temp Sperre |
| Sun shining on façade Status | Sonne auf Fass |
| Sun bright, short retraction delay status | Hellig. kurz |
| Sun bright, long retraction delay status | Hellig. lang |

Fig.4.25(12)Facades_Text that are output with object"Facade X channel state bit text"

**Parameter "Use facades"**

This parameter is used to set whether use facades.

Options:

**No**

**Yes**

**Parameters as follow are visible when “use facades” is selected “yes”.**

**Parameter “Use simulation objects”**

This parameter is used to set whether use simulation objects.

Options:

**No**

**Yes**

**During simulation, no times(delays,etc) are used.**

**Only retraction delay in the automatic solar protection is 10 seconds for simulation.**

**Parameter “Use facade 1/../12”**

This parameter is used to activate the required facades individually in order to load the menus for the safety and automation functions.

Options:

**No**

**Yes**

**General settings**

**Maintain the**

**Parameter “threshold values received via communication objects”**

Set, in which cases threshold values received are to be kept per object.

Options:

**Not**

**After power supply restoration**

**After power supply restoration and programming**

**Note: The setting "After power restoration and programming" should not be used for the initial start-up, as the factory settings are always used until the first call (setting via objects is ignored).**

**Live monitoring**

**Parameter "Use wind and rain object monitoring"**

If the functionality of the wind and rain sensors is to be checked, use wind and rain object monitoring. If data is not regularly being received from the sensors, a defect is assumed and the corresponding alarm is triggered.

Options:

**No**

**Yes**

**——Parameter "Monitoring period"**

This parameter is visible when previous parameter is selected "yes".

This parameter is used to set the monitoring period.

Options:

**5sec**

**10sec**

**...**

**1h**

**2h**

**Note: Independently of live monitoring, the measured values for wind, outdoor temperature and global radiation (pyranometer) are monitored for changes. After 48 hours without any change in the measured values a defect is assumed and the corresponding function is set to alarm or block. No settings are required for this.**

**Wind and rain alarm:**

Set the automation block for wind and rain alarm. Please observe, that this block begins after the end of the wind or rain alarm and is only valid for automation. It avoids frequent extension and retraction during rapidly changing weather conditions. Manual operation is again possible directly after the end of the alarm.

**Parameter "Preset of the automation blocking duration per"**

**Parameter "Automation blocking duration after wind and rain alarm(in minutes)"**

The duration of the blocking can be specified by parameter or received as an object via the bus.

Options: **Parameter/Object**

Options: **0...360**

**Parameters as follow are visible when "Preset of the automation blocking duration per" is selected "object".**

**Parameter "Minimum automation blocking duration"**

**Parameter "Maximum automation blocking duration"**

**Parameter "Blocking duration increment"**

When specifying the blocking duration by object the minimum and maximum blocking duration and the increment for the change to the parameter are also defined.

Options: **0...360**

Options: **0...360**

Options: **0...50**

**Rain automation:**

For external shades either a rain alarm or a rain automation can be set which have opposite functions. The selection is made in the chapter 4.25.1 facade X: Function, safety.

The rain alarm protects the shading against getting wet. The rain automation ensures that the shading is, under certain conditions, extended during rainfall. The curtain can thus be cleaned by natural means. Please observe the specifications from the manufacturer of the curtain and set the rain alarm or automation accordingly.

Rain alarm: Shading is retracted as soon as precipitation is signalled and is blocked during the precipitation.

Rain automation: Precipitation is only considered in preset periods. A rain position is approached. The extension delay during precipitation can be set.

Parameter "Preset of extension delay for rain automation per"

Parameter "Extension delay on rain automation(in minutes)"

If a rain automation has been set for the shading, then the extension delay can be specified directly via parameter or received as an object via the bus.

Options:**Parameter/Object**

Options: **1...120**

**Night**

Parameter "Specify the threshold value for night-time, based on"

Parameter "Night is detected below (in Lux)"

Set the night threshold value. The threshold value can be specified directly by parameter or received as an object via the bus. The device's internally measured value is used for brightness. The switching delay between day and night is 1 minute.

Options: **Parameter/Object**

Options: **1...200**

**Parameters as follow are visible when "Preset of extension delay for rain automation per" is selected "object".**

Parameter "Minimum adjustable value (in Lux) for twilight"

Parameter "Maximum adjustable value (in Lux) for twilight"

Parameter "Step size (in Lux)"

When specifying the threshold value by object the minimum and maximum values that can be set for twilight values and the increment for the change are also defined.

Options: **1...200**

Options: **1...200**

Options: **1...10**

**Outdoor temperature**

**For frost alarm,heat protection and outdoor temperature block**

**Parameter "Measurement of"**

Define which outdoor temperature value for frost alarm, heat protection and outdoor temperature block are to be used. The device's own internal values or a value received via a communication object can be used.

Options:

**Internal sensor**

**Communication object**

**Note: After 48 hours without any change in the value a defect is assumed and the frost alarm, heat protection and outdoor temperature block are activated.**

**Heat protection**

**Parameter "Preset of the threshold value for heat protection per"**

**Parameter "Temperature (in 0.1°C)"**

**Parameter "Switching distance (hysteresis) (in 0.1°C)"**

Define the outdoor temperature for the heat protection. The threshold value can be specified directly by parameter or received as an object via the bus.

Options: **Parameter/Object**

Options: **100...500**

Options: **10...200**

**Parameters as follow are visible when "Preset of the threshold value for heat protection per" is selected "object".**

Parameter "Minimum adjustable temperature(in 0.1°C)"

Parameter "Maximum adjustable temperature(in 0.1°C)"

Parameter "Step size (in 0.1°C)"

When specifying the threshold value by object the minimum and maximum values that can be set for temperature and the increment for the change are also defined.

Options: **100...500**

Options: **100...500**

Options: **1...10**

**Frost alarm**

This frost alarm is only used within the facade controller and is independent of the general parameter Frost alarm.

Parameter "Preset of frost protection values per"

Parameter "outdoor temperature of (0.1 °C)"

Parameter "(in hours)"

The frost alarm is active in cold outdoor temperatures in combination with precipitation. The conditions can be specified directly by parameter or received as an object via the bus.

Options: **Parameter/Object**

Options: **-200...300**

Options: **1...10**

**Parameters as follow are visible when "Preset of frost protection value per" is selected "object".**

**Start/End frost alarm if an**

Parameter "Minimum adjustable ext. temperature(in 0.1°C)"

Parameter "Max. Variable external temperature (in 0.1°C)"

Parameter "Minimum adjustable end time (in hours)"

Parameter "Maximum variable start time (in hours)"

Parameter "Temperature increment (in 0.1°C)"

When specifying the conditions by object the minimum and maximum temperature and time values that can be set and the temperature increment for the change are also defined.

Options: **-200...300**

Options: **-200...300**

Options: **1...10**

Options: **1...10**

Options: **0...255**

**Facades status output**

Information on the various possibilities for the status output can be found in chapter 4.25.1.8 Status output . In principal the status output is a singular function, but, in compact form, possible for singular and for all facades possible. For the output in a compact form pre-sets are made here and the output texts defined.

Parameter "Analysis of the status release object"

Parameter "Value up to 1st communication"

Set which value in the status release object for all facades means active respectively inactive.

Options: **1=activated | 0=deactivated/0=activated | 1=deactivated**

Options: **0/1**

**Texts that are output with object "Facade X channel state text"**

For the status output the status bit selected (i.e. the function) and, if applicable, also the active facade is output. As a result, it can easily be visualised which status is just being issued. The texts can be adapted individually and should, as a maximum, be 14 characters long.

Parameter "Safety"

Parameter "Automatic delay after alarm"

Parameter "Wind extension block"

Parameter "Time open"

Parameter "Outdoor temperature block"

Parameter "Time/night closure"

Parameter "Heat protection"

Parameter "Pyranometer"

Parameter "Rain automation"

Parameter "Interior temperature lock"

Parameter "Shading because of the sun"

Parameter "No automation active"

**Texts that are output with object "Facade X channel status bit text"**

Parameter "Block automation using communication object"

Parameter "Wind extension block status"

Parameter "Wind alarm status"

Parameter "Rain alarm status"

Parameter "Rain automation status"

Parameter "Frost alarm status"

Parameter "Safety status"

Parameter "Time open status"

Parameter "Outdoor temperature block status"

Parameter "Night closure status"

Parameter "Time closure status"

Parameter "Heat protection status"

Parameter "Pyranometer status"

Parameter "Indoor temperature blocking status"

Parameter "Sun shining on facade status"

Parameter "Sun bright, short retraction delay status"

Parameter "Sun bright, long retraction delay status

### 4.25.1 Parameter window “Facade 1/.../12: Function, safety”

Set the basic and safety relevant functions for the facade.

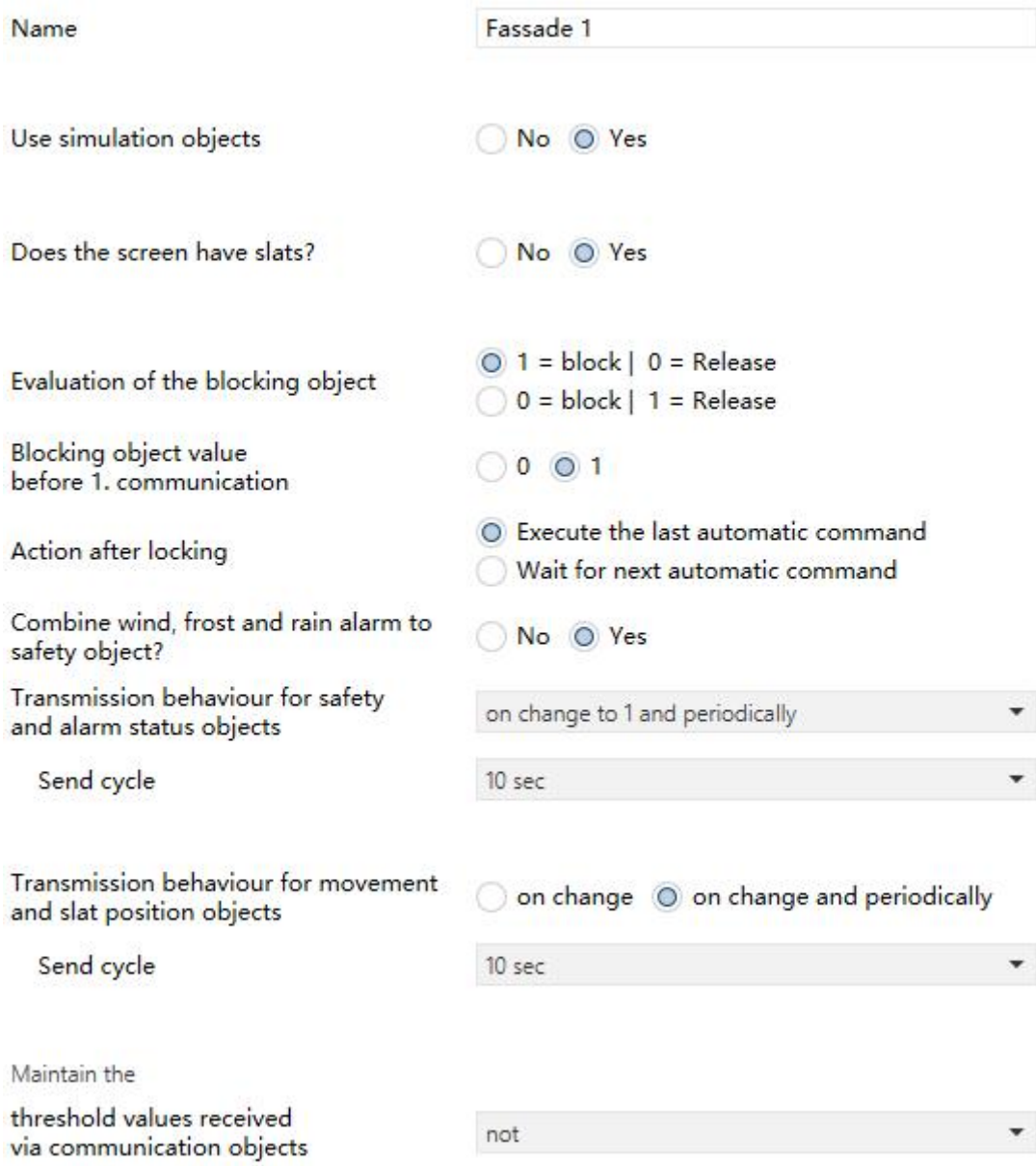



Fig.4.25.1(1)

Wind alarm

| | |
|---|---|
| use | as wind alarm per threshold value |

Note: If there has been no measurement change at the activated wind sensors within 48 hours, wind alarm will be triggered.

use the following wind sensors

| | |
|---|---|
| Internal sensor measurement | ○ No ◉ Yes |
| Measurements of communication object | |
| Façade wind 1 | ◉ No ○ Yes |
| Façade wind 2 | ◉ No ○ Yes |
| Façade wind 3 | ◉ No ○ Yes |
| Façade wind 4 | ◉ No ○ Yes |
| Façade wind 5 | ◉ No ○ Yes |
| Façade wind 6 | ◉ No ○ Yes |
| Façade wind 7 | ◉ No ○ Yes |
| Façade wind 8 | ◉ No ○ Yes |
| Façade wind 9 | ◉ No ○ Yes |
| Façade wind 10 | ◉ No ○ Yes |
| Façade wind 11 | ◉ No ○ Yes |
| Façade wind 12 | ◉ No ○ Yes |

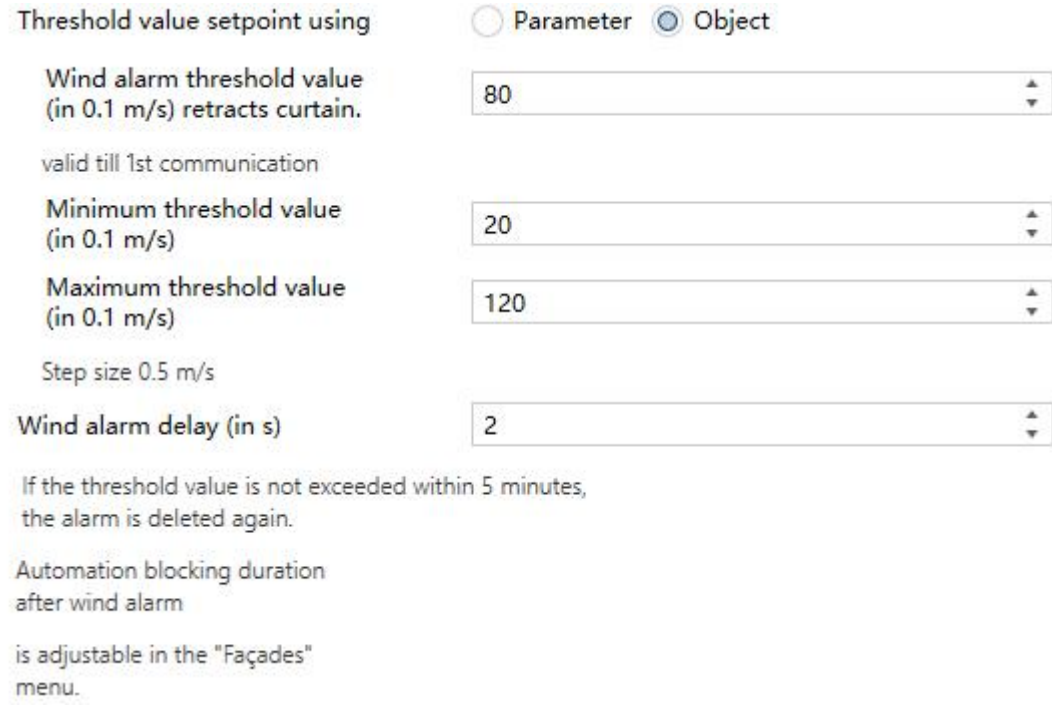



Fig.4.25.1(2) Wind alarm

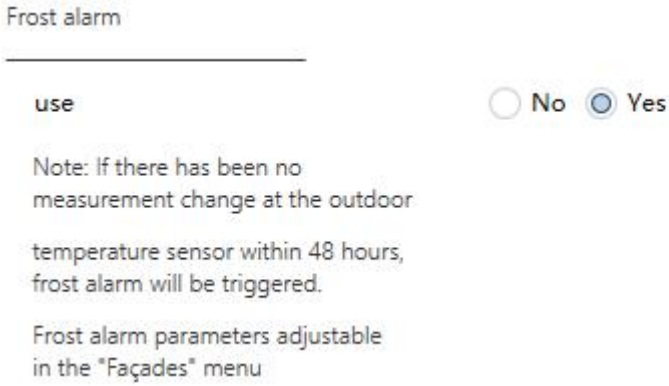



Fig.4.25.1(3) Frost alarm

Rain

| | |
|---|---|
| use | as rain automation |
| Extension delay is set in the Façades menu. | |
| Use rain automation | |
| with week time switch | |
| Period 1 | ○ No ◉ Yes |
| Period 2 | ◉ No ○ Yes |
| Period 3 | ◉ No ○ Yes |
| Period 4 | ◉ No ○ Yes |
| Period 5 | ◉ No ○ Yes |
| Period 6 | ◉ No ○ Yes |
| Period 7 | ◉ No ○ Yes |
| Period 8 | ◉ No ○ Yes |
| Period 9 | ◉ No ○ Yes |
| Period 10 | ◉ No ○ Yes |
| Period 11 | ◉ No ○ Yes |
| Period 12 | ◉ No ○ Yes |
| Period 13 | ◉ No ○ Yes |
| Period 14 | ◉ No ○ Yes |
| Period 15 | ◉ No ○ Yes |
| Period 16 | ◉ No ○ Yes |
| Period 17 | ◉ No ○ Yes |
| Period 18 | ◉ No ○ Yes |
| Period 19 | ◉ No ○ Yes |

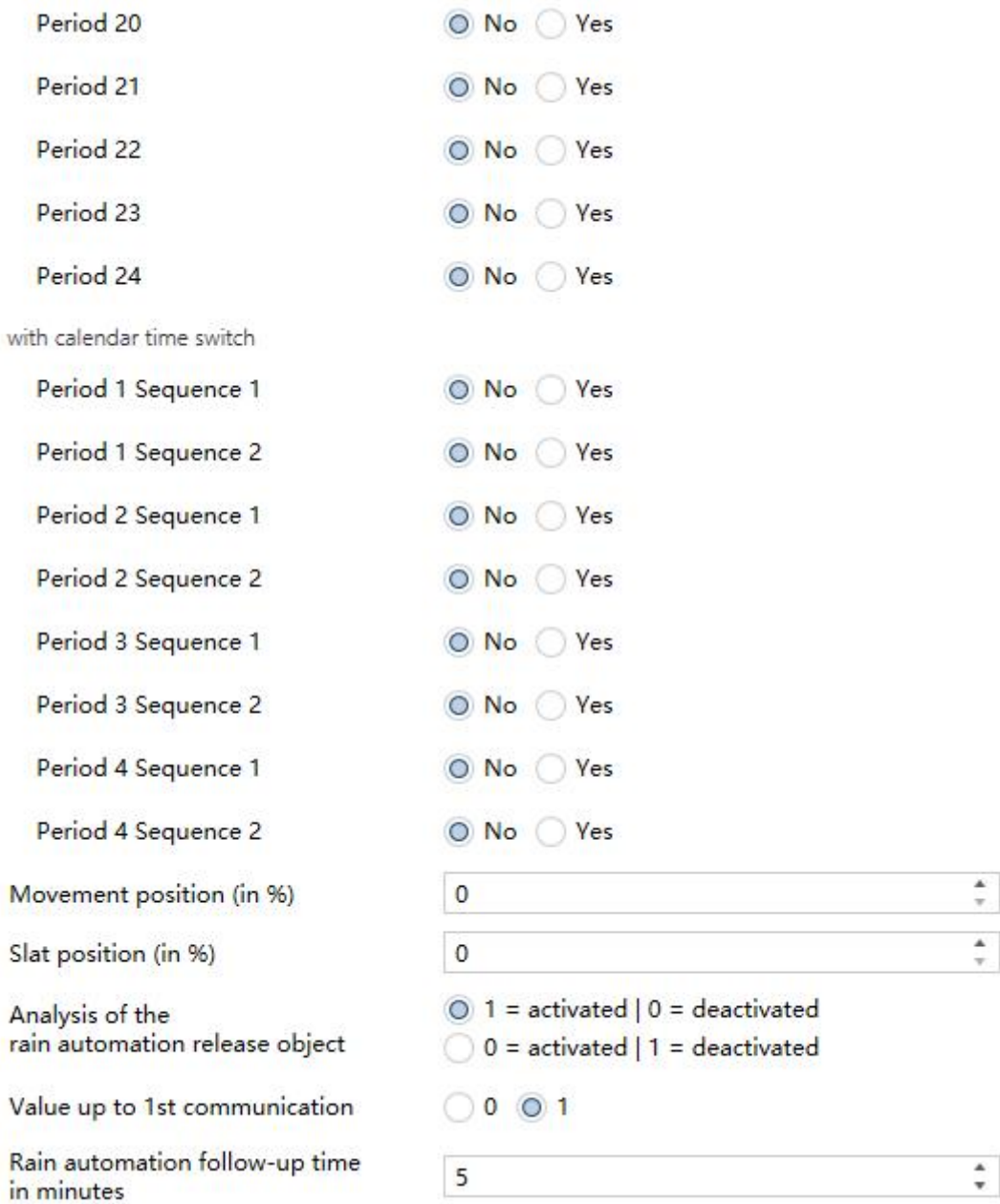



Fig.4.25.1(4) Rain

**Parameter "Name"**

Enter a name for the facade.

**Parameter "Use simulation objects"**

This parameter sets whether use simulation objects.Simulation help when testing the settings that have been made. For this observe the chapter 4.25.1.7 Simulation.

Options:

**No**

**Yes**

### Parameter "Does the screen have slats?"

For shutters and slat blinds use the setting - shade has slats. As a result, further settings, especially for slats, are possible.

Options:

**No**

**Yes**

### Parameter "Evaluation of the blocking object"

This parameter is used to set what a 1 or 0 at the block entry means.

Options:

**1=block | 0=release**

**0=block | 1=release**

### Parameter "Blocking object value before 1. communication"

An object value up to the 1st communication is specified here.

Options:

**0**

**1**

### Parameter "Action after locking"

This parameter is used to set the action after locking.

Options:

**Execute the last automatic command**

**Wait for next automatic command**

**Parameter "Combine wind, frost and rain alarm to safety object?"**

This parameter is used to set whether combine wind, frost and rain alarm to safety object.

Options:

**No**

**Yes**

**Parameter "Transmission behaviour for safety and alarm status objects"**

This parameter is used to set the transmission behavior for safety and alarm status sent to the bus.

Options:

**On change**

**On change to 1**

**On change to 0**

**On change and periodically**

**On change to 1 and periodically**

**On change to 0 and periodically**

**——Parameter "Send cycle"**

This parameter is visible when previous parameter is selected "On change and periodically" , "On change to 1 and periodically" and "On change to 0 and periodically".

When sending periodically, the safety and alarm status is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10sec**

**...**

**1.5h**

**2h**

**Parameter "Transmission behaviour for movement and slat position objects"**

This parameter is used to set the transmission behavior for movement and slat position.

Options:

**On change**

**On change and periodically**

**——Parameter "Send cycle"**

This parameter is visible when previous parameter is selected "On change and periodically".

When sending periodically, the movement and slat position is sent on the bus in a fixed cycle that can be set here.

Options:

**5sec**

**10sec**

**...**

**1.5h**

**2h**

**Maintain the**

**Parameter "threshold values received via communication objects"**

Set, in which cases threshold values received are to be kept per object.

Options:

**Not**

**After power supply restoration**

**After power supply restoration and programming**

**Note:**

**1.This setting also affects the release objects of the facade automation (opening time, time and night closing, heat protection, pyranometer, rain automation, indoor temperature block, outdoor temperature block and solar protection automation).**

**2.The setting "After power restoration and programming" should not be used for the initial start-up, as the factory settings are always used until the first call (setting via objects is ignored).**

**Priorities:**

The functions of the facade are arranged according to their priorities. First named have higher priority. 1. Wind, 2. Frost, 3. Rain.

**Wind alarm**

If the wind threshold values are exceeded, a wind alarm can be triggered, i.e. the shade is retracted.

If the wind extension block is active, the curtain can no longer be extended (not even by manual commands). If the curtain has already been extended, it remains in its position.

If the wind alarm is used, then, as a precaution, the alarm is activated, if over a period of 48 hours no change in the measured value has been recorded at the relevant wind sensor.

**Parameter "use"**

Set with what the wind alarm and, if desired, wind extension blocking is to be defined.

Options:

**No**

**As wind alarm per threshold value**

**As wind alarm per bit object**

**As wind alarm and ext.blocking per TVL**

**As wind alarm per TVL/ext.blocking per bit obj.**

**As wind alarm per bit obj./ext.blocking per TVL**

**As wind alarm/wind ext.blocking per bit obj.**

If **alarm or extension block per bit object** is defined, no further settings are required. The wind alarm is defined externally and the alarm or block information is received by the weather station as a 1-bit object. The duration of blocking by the automation after a wind alarm is set in the chapter 4.25 facades ( Wind and rain alarm)

If **Alarm or extension block per threshold value** is defined, then set which sensors are relevant for this. The wind value measured internally in the device can be used, but also the values of the external wind communication objects assigned to the facades. With several sensors, only one must exceed the threshold value in order for the alarm/ block to become active.

In addition, a delay can be specified per parameter. It specifies the time that elapses from the point at which the threshold value is exceeded until the wind alarm or the wind extension block is triggered. If the value falls below the threshold value, a fixed holding time of 5 minutes elapses before the wind alarm / the wind extension block is deactivated again. If the threshold value is exceeded within 5 minutes, the holding time starts again from the beginning.

After the five-minute holding time has elapsed, the automatic block starts. It is set in the "facades" menu (see Wind and rain alarm). Manual driving is possible again immediately after the holding time has elapsed.

**Parameters as follow are visible when “Use” is selected “As wind alarm per threshold value”, “As wind alarm and ext.blocking per TVL” and “As wind alarm per bit obj./ext.blocking per TVL” .**

**Note: If there has been no measurement change at the activated. Wind sensors within 48 hours, wind alarm will be triggered.Use the following wind sensors**

**Parameter “Internal sensor measurement”**

This parameter is used to set whether use internal sensor measurement.

Options:

**No**

**Yes**

**Parameter "Facade wind 1/.../12"**

This parameter is used to set facade wind 1/.../12.

Options:

**No**

**Yes**

**Parameter "Threshold value setpoint using"**

Select whether the threshold value is to be specified per parameter or via a communication object.

Options:

**Parameter**

**Object**

**Parameter "wind alarm threshold value (in 0.1 m/s) retracts curtain."**

**Parameter "wind alarm delay (in s)"**

When the threshold value per parameter is specified, then the value and delay time are set.Options:

**0...255**

**Parameter "wind alarm threshold value (in 0.1 m/s) retracts curtain."**

**Parameter "Minimum threshold value (in 0.1 m/s)"**

**Parameter "Maximum threshold value (in 0.1 m/s)"**

**Parameter "wind alarm delay (in s)"**

When the threshold value per communication object is specified, then the starting value, minimum and maximum threshold value and delay time are set.

Options: **0...255**

**Frost alarm**

**Note: If the frost alarm is used, then, as a precaution, the alarm is activated, if over a period of 48 hours no change in the measured value has been recorded at the relevant outdoor temperature sensor.**

**Parameter "use"**

Set whether the frost alarm is to be used for this facade. Further parameters for the frost alarm are set in the chapter 4.25 facades (see Frost alarm).

Options:

**No**

**Yes**

**Rain**

In the event of precipitation either a rain alarm can be triggered for the facade, i.e the shade is retracted and blocked, or a rain automation is executed. The rain automation moves to a certain position and is valid for the periods set. At other times with "rain automation" set the shade does not react to precipitation.

Further parameters for the rain automation are set in the chapter 4.25 "facades" ( Rain automation).

Rain alarm does not have any extension delay.

**Note:Within the automation functions the rain automation has a low priority. To display the sequence, rain automation is also listed in the facade X automation without the settings being possible.**

**Parameter "use"**

Set whether precipitation should trigger the rain alarm or the rain automation.

Options:

**No**

**As rain alarm**

**As rain automation**

**Parameters as follow are visible when “Use” is selected “As rain automation”.**

**Parameter “Period 1/.../24”**

**Parameter “Period 1/2/3/4 Sequence 1/2”**

If in the event of precipitation, the rain automation is triggered, then set in which periods of the week and the calendar-timer, the rain movement position is to be travelled to. The periods are defined in the menu "week timer" or "month timer" (see chapter 4.27 Weekly timer and chapter 4.28 Calendar timer).

Options: **No/Yes**

**Parameter “Movement position (in %)”**

**Parameter “Slat position (in %)”**

Then also set the movement and slat position.

Options: **0...100**

**Parameter “Analysis of the rain automation release object”**

**Parameter “Value up to 1st communication”**

Define the value of the release object for the rain automation. Using the release object, the rain automation can be deactivated at short-notice.

Options: **1=activated | 0=deactivated/0=activated | 1=deactivated**

Options: **0/1**

**Parameter “Rain automation follow-up time in minutes”**

Define the follow-up time The follow-up time is the delay time after the end of the precipitation warning.

Options: **1...120**

#### 4.25.1.1 Classifying the facades for the control unit

The control options for shadings are Facade-related functions.

Most buildings have 4 facades.In principle the sun protection of each facade should be controlled separately, as shown in Fig1.

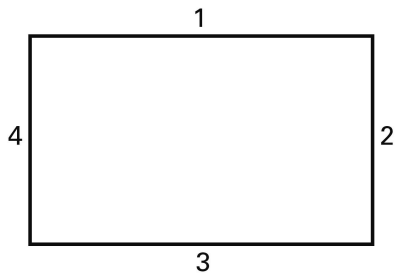



Fig.1

Even in buildings with a U-shaped layout only 4 facades have to be controlled differently, as several have the same alignment, as shown in Fig2.

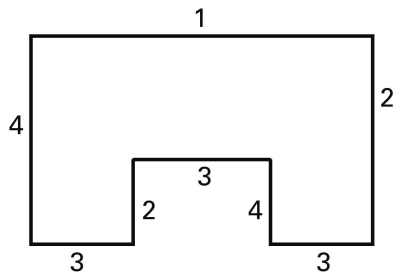



Fig.2

In buildings with an asymmetrical layout the facades with a non-right-angled orientation(2,3,5) and facades that are set back(6) must be controlled separately, as shown in Fig3.

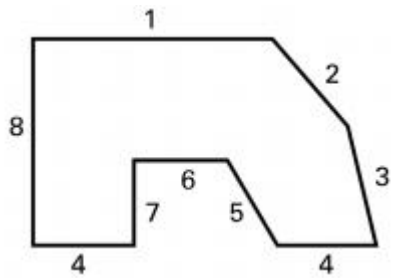



Fig.3

If a building has more than 12 Facades, the deployment if another weather station is recommended; particularly as this also makes it possible to measure the wind speed in another location.

When there are several buildings, wind measurement should take place separately for each building(e.g. with additional wind sensor ), as depending on the positions of the buildings in relation to one another, different wind speeds may occur.

#### 4.25.1.2 Orientation and inclination of the Facade

Alignment and slant of the facade are needed for the shadow edge tracking and the slat auto-guide.

Top view

The facade orientation corresponds to the angle be tween the North-south axis and the facade vertical.The angle here is measured in a clock wise direction, as shown in Fig.1.

The facade orientations result as follows:

Facade 1：α Facade 2：β=α+90°

Facade 3：γ=α+180° Facade 4：δ=α+270°

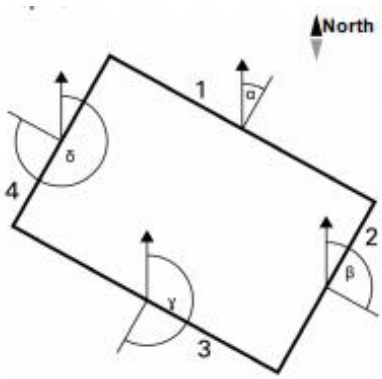



Fig.1

Example: The building in the illustration is turned α = 30° to the east i.e. the Facade alignment is 30°, 120°, 210° and 300°.

Side view: if a facade surface is not oriented vertically, this must be taken into account. A forward inclination of the facade is counted as a positive angle; a back wards inclination(as in the picture)as a negative angle. This also allows a sunshade of a window built into a sloping roof surface to be controlled according to the current position of the sun, as shown in Fig.2.

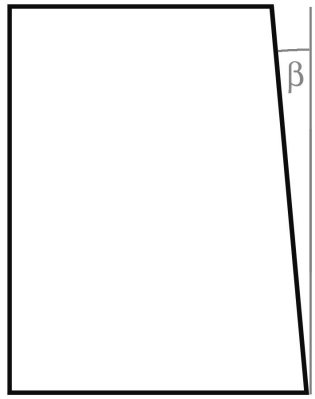



Fig.2

If a Facade is not a flat surface, but rather arched or bent, it must be subdivided into several segments that are controlled separately.

Remember, when setting a facade inclination greater than 0° also to adjust the height of the sun at which shading is to take place.

#### 4.25.1.3 Shadow edge tracking and slat tracking

**Shadow edge tracking**

With shadow edge tracking the sunshade is not moved down fully; instead, it is moved only so far that the sun can still shine a configurable distance (e.g. 50 cm) into the room. This allows the room user to look outside through the lower part of the window, and plants which may be on the window ledge to be exposed to the sun.

Shadow edge tracking can only be used with a sunshade which is moved from the top downwards (e.g. shutters, textile shades or blinds with horizontal slats). This function cannot be used with sunshades which are pulled in front of a window from one or both sides.

**Slat tracking**

During slat tracking the horizontal slats of shutters are not fully closed but rather automatically adjusted according to the position of the sun so that it cannot shine directly into the room. Diffuse daylight can still enter the room through the slats and contribute to dazzle-free room lighting. Using slat tracking with an external shutter, the entry of warm air into the room through sunshine can be reduced and, at the same time, energy costs for lighting the room can be reduced.

**Using shadow edge tracking and slat tracking**

Sunshade when the position of the sun is high: The sunshade is only partially closed and automatically moved down only enough so that the sun cannot shine further into the room than specified via the maximum permitted penetration depth. The slats can be set almost vertically without the sun shining directly into the room, as shown in Fig.1.

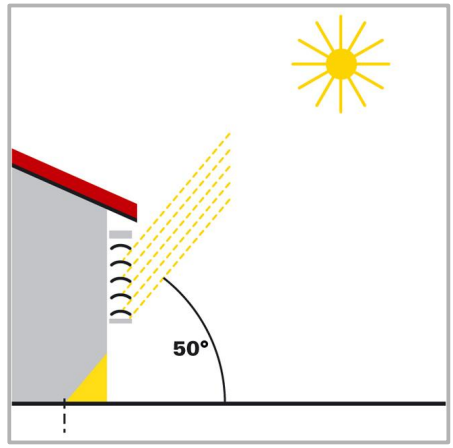



Fig.1

Sunshade when the sun is in a central position: The sunshade is automatically moved down only far enough so that the sun does not exceed the maximum permitted penetration depth in the room. The slats are automatically closed further, so that the sun can not shine directly into the room. Despite that.diffuse daylight can still reach the room and so contribute to the room lighting, as shown in Fig.2.

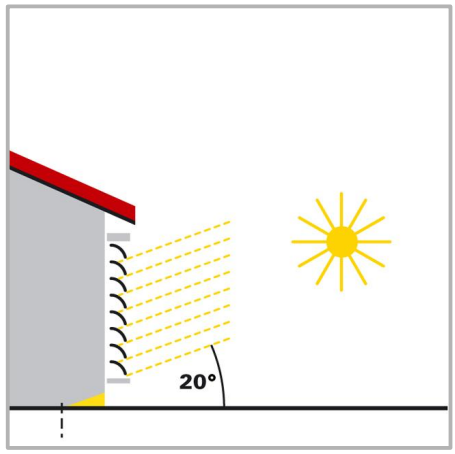



Fig.2

Sunshade when the position of the sun is low: The sunshade is automatically moved down almost fully, so that the sun does not shine too far into the room. The slats are automatically closed further, so that the sun does not shine in directly, as shown in Fig.3.

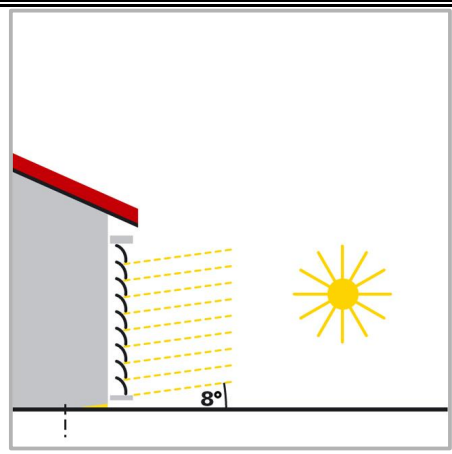



Fig.3

#### 4.25.1.4 Slat type and determination of width and spacing

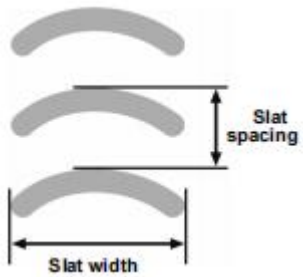
With slat tracking, a distinction is made between a sunshade or glare protection with horizontal slats and one with vertical slats.

A sunshade with horizontal slats (e.g. external shutter) is typically moved downwards from the top. By contrast, an internal glare protector often consists of thin strips of material (vertical slats), which can be rotated around 180° and are pulled out from one or both sides of the window.

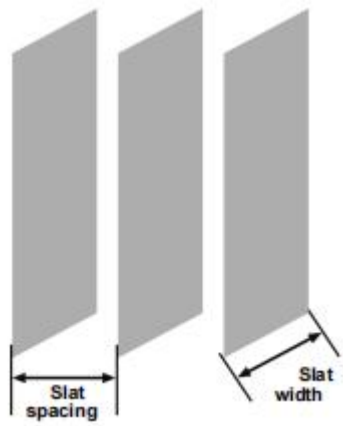
Both types of slat can be adjusted by the KNX GPS weather station Pro so that no direct sunlight falls into the room, but as much diffuse daylight as possible does.

In order for slat tracking to set the slats correctly, their width and spacing from one another must be known.

Horizontal slats




Vertical slats



#### 4.25.1.5 Slat position for horizontal slats

The slat angle at 0% move command and at 100% move command must, during commissioning, be aligned to the pre-settings of the product parameters of the KNX GPS Weather Station Pro, and, if necessary, corrected, so that the slat guide on the facade works properly.

The drive used for the shutters defines whether this adjustment can take place almost continuously during slat tracking in many small steps (as with SMI drives, for example) or whether it is only possible in a few large steps (as with most standard drives).

**Slat position at 100%**

After moving to the 100% slat position the slats form an angle with the vertical. This angle must be entered in the parameter "Slat angle (in °) after slat move command 100%" . The default setting is 10°.

Example of a typical slat position at move command 100%(angel α approx 10° ), as shown in Fig1.

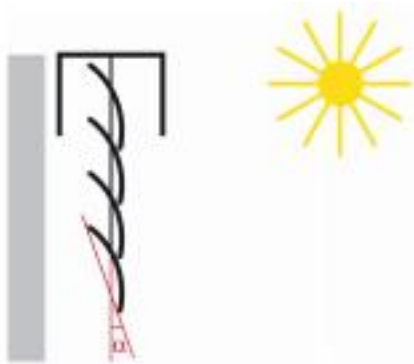


Fig.1

**Slat position at 0%**

After moving to the 0% slat position the slats form another angle with the vertical. This must be entered in the parameter "Slat angle (in °) after slat move command 0%" . The default setting is 90°.

The possible angle at slat position 0% depends on the mechanics of the blind and the actuator.

Example 1 of a typical slat position at move command 0%(angel α approx 90° ), as shown in Fig2.

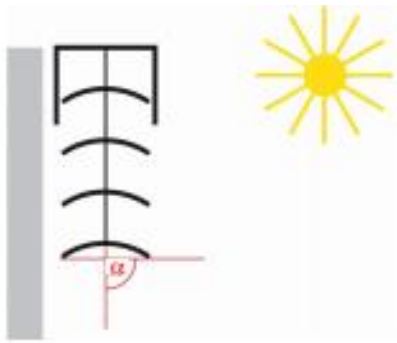



Fig.2

Example 2 of a typical slat position at move command 0%(angel α approx 160° ), as shown in Fig3.

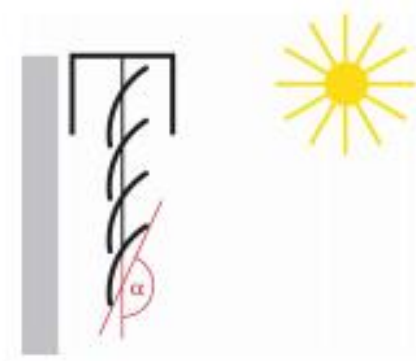



Fig.3

By setting the actual angle at 0% and 100% slat position the facade controller can convert the optimal slat angle for the actual sun position into a % command and transmit this to the actuator.

#### 4.25.1.6 Slat position for vertical slats

The slat angle at 0% move command and at 100% move command must, during commissioning, be aligned to the pre-settings of the product parameters of the KNX GPS Weather Station Pro, and, if necessary, corrected, so that the slat guide on the facade works properly

**Slat position at 100%**

After moving to the 100% slat position the slats form an angle with the direction of movement. This angle must be entered in the parameter "Slat angle (in °) after slat move command 100%". The default setting is 10°.

The angle α is, seen from the outside, always measured to the left.

Example of a slat position at move command 100%(angel α approx 10° ), as shown in Fig1.

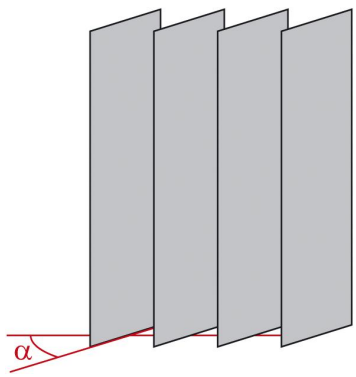



Fig.1

**Slat position at 0%**

After moving to the 0% slat position the slats form another angle with the direction of movement. This must be entered in the parameter "Slat angle (in °) after slat move command 0%" . The default setting is 90°.

Example 1 of a slat position at move command 0%(angel α approx 90° ), as shown in Fig2.

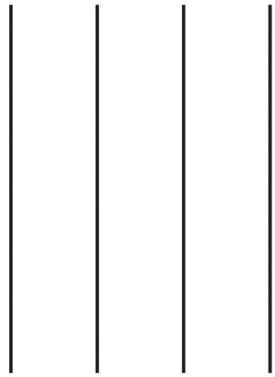


Fig.2

Example 2 of a slat position at move command 0%(angel α approx 130° ), as shown in Fig3.

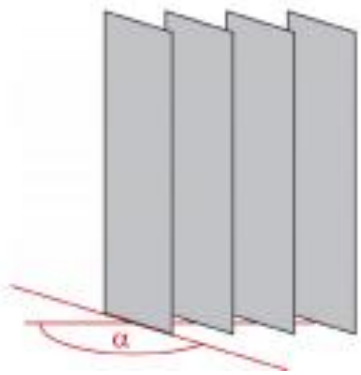



Fig.3

The possible angle utilisation (difference between slat position 100% and 0%) depends on the mechanics of the blind and the actuator. Take care that the angle utilisation is not limited by the configuration of the actuator.

By setting the actual angle at 0% and 100% slat position the facade controller can convert the ideal slat angle for the actual sun position into a % command and transmit this to the actuator.

#### 4.25.1.7 Simulation

Simulation objects help when testing the settings that have been made for facades. They are activated in the setting area facades. By sending various values to the simulation objects number 656 to 671 different weather conditions and times of day can be tested. With the object670 "facade simulation reset (1:Reset)" you can delete all the simulation values that were set.

**Activating simulation**

In order to start the simulation, the simulation object for the facade must be activated. For facade 1, for example, the object is "672 facade 1 simulation (1: On | 0: Off) Set the value of this object to 1 to start the simulation for facade 1.

The facade and all other subordinate functions must be released (no active blocks) so that the simulated positions can be output.

When the simulation is activated the retraction delay (movement delay LONG) is set to 10 seconds. All other delay times are set to 0. All output objects of the relevant facade adapt their state to the values of the input objects for the simulation. The objects for normal operation are ignored.

**Ending the simulation**

Set the value of the object "facade 1 simulation (1:on | 0:off)" to 0 to end the simulation for facade 1.

When deactivating the simulation, it is possible that when an automation is performed for the first time (e.g. sun automation) that the delay times from the simulation are still used. All output objects of the relevant facade adapt their state to the values of the input objects for normal operation. The simulation objects are once again ignored.

The most recently received values for the simulation objects and also for the objects for normal operation are retained when switching between simulation and normal mode. No reset takes place. This means that when the simulation is ended the last used value for normal operation is applied.

**Calculation of the sun position for the simulation**

During the simulation it is possible to have the sun position, dependent on the simulation object for date and time, sent to the bus. In order that this functions, a location must be set in the product parameters or the location received via GPS. As long as the location is unknown sun positions are not calculated in the simulation.

#### 4.25.1.8 Status output

The status of the automation functions of the facade controller can be used for visualisation or other bus functions. The device offers various possibilities for the status output.

**Object status**

A status object is available for every function of the automatic.

For the rain alarm on facade 1, for example, it is the object No. 685 "facade 1 rain alarm status".

**Status of all facades**

The status of all facades and their automatic functions can be issued in a compact form via an automatic status-bit object. For this purpose, a status of safety, automatic delay after an alarm, wind extension block, timed opening, timed/night closure, heat protection, pyranometer, rain automation, indoor temperature block, outdoor temperature block, shading because of the sun or automatic status, can be issued for every facade. Only the condition of one function of one facade is always issued. Using the object 655 one can switch to the next function (status-bit) and/or with the object 650 to the next facade.

The objects 648 to 655 are used for the compact output.

| No. | Identification | Range | Function/Info |
|---|---|---|---|
| 648 | facade X channel Status output | Activation | Set to "active" in order to use the status output |
| 649 | facade X channel Name | facade | Output of the facade name (when changing facades). |
| 650 | facade X channel (1:+ \| 0:-) | facade | Change to the next/previous facade. |
| 651 | facade X channel Status text | Status | Output of the condition of the selected status-bit as text. |

| | | | |
|---|---|---|---|
| | | | |
| 652 | facade X channel Status-bit text | Status | status-bit (when changing the status bit). |
| 653 | facade X channel Status-bit condition | Status | Output of the selected automatic status bit. |
| 654 | facade X channel Delay | Status | Displaying the delay time for the selected status-bit.<br>Some automation functions have delay times that must first be run through before the status-bit is (re-)set. |
| 655 | facade X channel Status-bit selection (1:+ \| 0:-) | Status | Output of the automatic status-bit |

**Status of a facade**

The compact form of the status output described for all facades can also be performed for single facades. For this, the objects 731 to 736 are used for facade 1, for the other facades the objects named accordingly for the desired facade. The status output corresponds to that for all facades, only that here the objects for changing facades and the text object for the output of the name of the facade are missing. The text output with the object 733 "facade 1 channel status-bit text" is also taken from the table Texts for object “Facade X channel status bit text”

#### 4.25.2 Parameter window “Facade 1/.../12: Automation”

Set automation for the facade

**Priorities**

The functions of the facade are arranged according to their priorities. First named have higher priority. 1. Time open, 2. Time and night closure, 3. Heat protection, 4. Pyranometer 5. Rain automation 6. Interior temperature block, 7. Outdoor temperature block, 8. Solar protection automation.

Timed opening

| | |
|---|---|
| use | ○ No ◉ Yes |
| used | |
| with week time switch | |
| Period 1 | ○ No ◉ Yes |
| Period 2 | ◉ No ○ Yes |
| Period 3 | ◉ No ○ Yes |
| Period 4 | ◉ No ○ Yes |
| Period 5 | ◉ No ○ Yes |
| Period 6 | ◉ No ○ Yes |
| Period 7 | ◉ No ○ Yes |
| Period 8 | ◉ No ○ Yes |
| Period 9 | ◉ No ○ Yes |
| Period 10 | ◉ No ○ Yes |
| Period 11 | ◉ No ○ Yes |
| Period 12 | ◉ No ○ Yes |
| Period 13 | ◉ No ○ Yes |
| Period 14 | ◉ No ○ Yes |
| Period 15 | ◉ No ○ Yes |
| Period 16 | ◉ No ○ Yes |
| Period 17 | ◉ No ○ Yes |
| Period 18 | ◉ No ○ Yes |
| Period 19 | ◉ No ○ Yes |

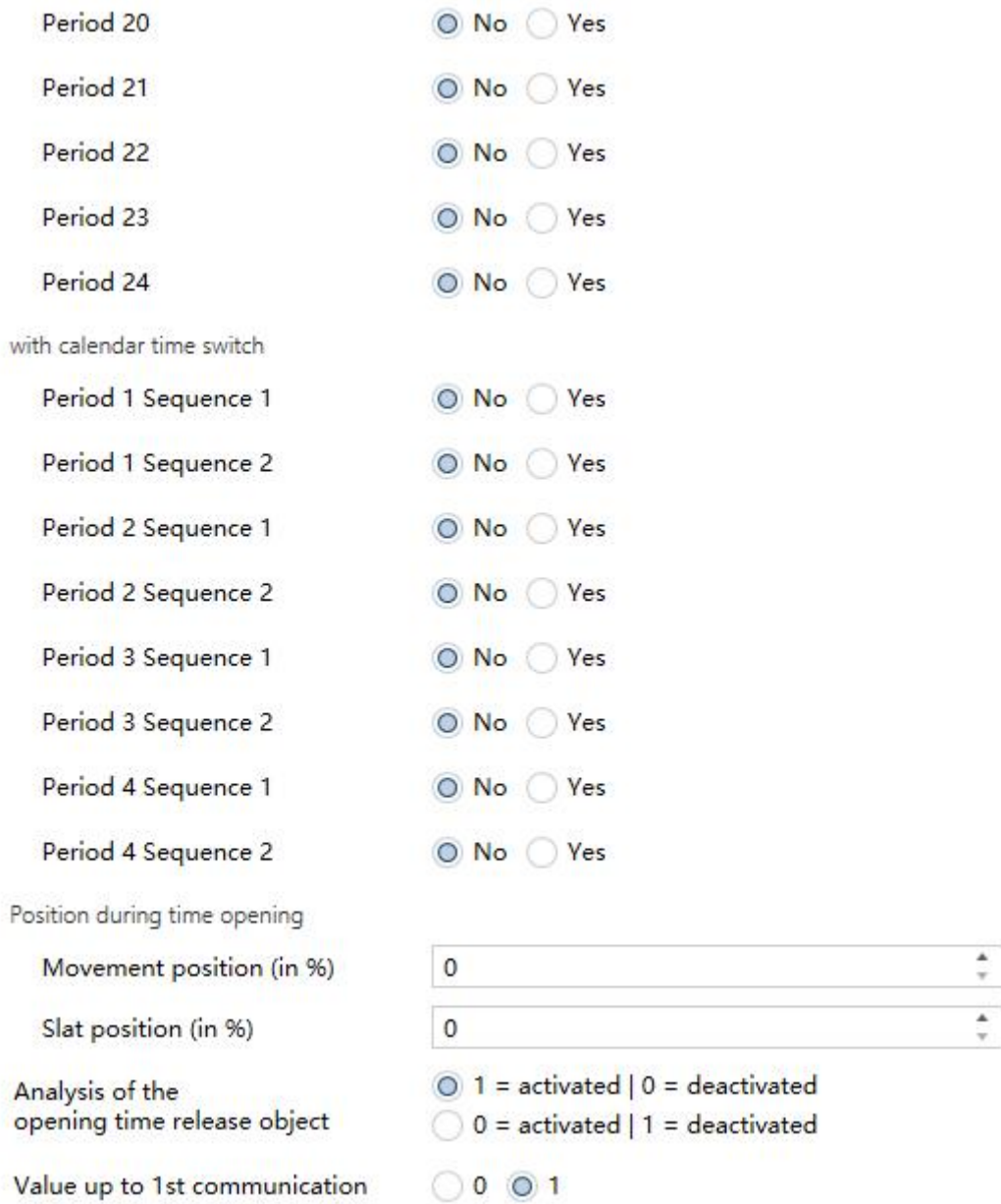



Fig.4.25.2(1) Timed opening

Timed and night closure

| | |
|---|---|
| use | ○ No ◉ Yes |
| Use timed closure | ○ No ◉ Yes |
| used | |
| with week time switch | |
| Period 1 | ◉ No ○ Yes |
| Period 2 | ◉ No ○ Yes |
| Period 3 | ◉ No ○ Yes |
| Period 4 | ◉ No ○ Yes |
| Period 5 | ◉ No ○ Yes |
| Period 6 | ◉ No ○ Yes |
| Period 7 | ◉ No ○ Yes |
| Period 8 | ◉ No ○ Yes |
| Period 9 | ◉ No ○ Yes |
| Period 10 | ◉ No ○ Yes |
| Period 11 | ◉ No ○ Yes |
| Period 12 | ◉ No ○ Yes |
| Period 13 | ◉ No ○ Yes |
| Period 14 | ◉ No ○ Yes |
| Period 15 | ◉ No ○ Yes |
| Period 16 | ◉ No ○ Yes |
| Period 17 | ◉ No ○ Yes |
| Period 18 | ◉ No ○ Yes |

| | |
|---|---|
| Period 19 | ◉ No ○ Yes |
| Period 20 | ◉ No ○ Yes |
| Period 21 | ◉ No ○ Yes |
| Period 22 | ◉ No ○ Yes |
| Period 23 | ◉ No ○ Yes |
| Period 24 | ◉ No ○ Yes |

with calendar time switch

| | |
|---|---|
| Period 1 Sequence 1 | ◉ No ○ Yes |
| Period 1 Sequence 2 | ◉ No ○ Yes |
| Period 2 Sequence 1 | ◉ No ○ Yes |
| Period 2 Sequence 2 | ◉ No ○ Yes |
| Period 3 Sequence 1 | ◉ No ○ Yes |
| Period 3 Sequence 2 | ◉ No ○ Yes |
| Period 4 Sequence 1 | ◉ No ○ Yes |
| Period 4 Sequence 2 | ◉ No ○ Yes |
| Analaysis of timed closure release object | ◉ 1 = activated \| 0 = deactivated<br>○ 0 = activated \| 1 = deactivated |
| value before 1st communication | ○ 0 ◉ 1 |

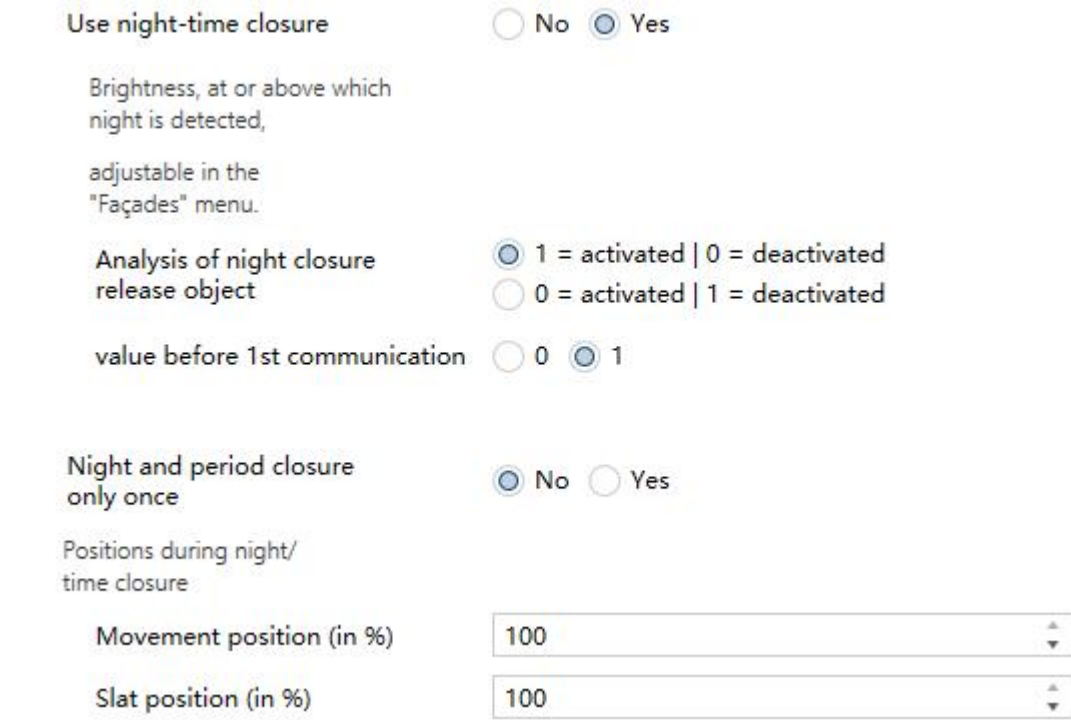



Fig.4.25.2(2) Time and night closure

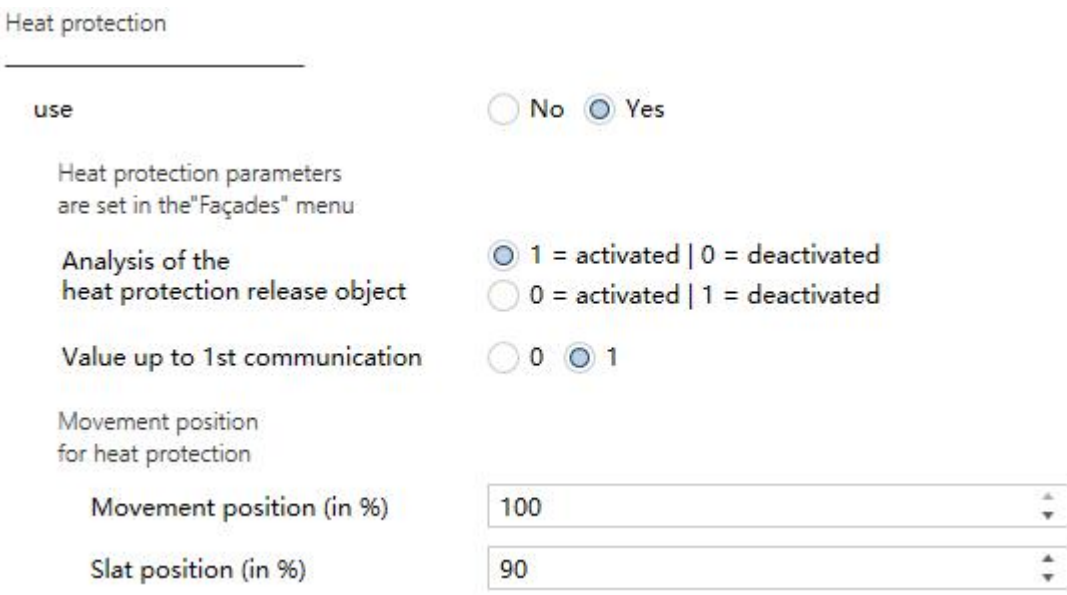



Fig.4.25.2(3) Heat protection

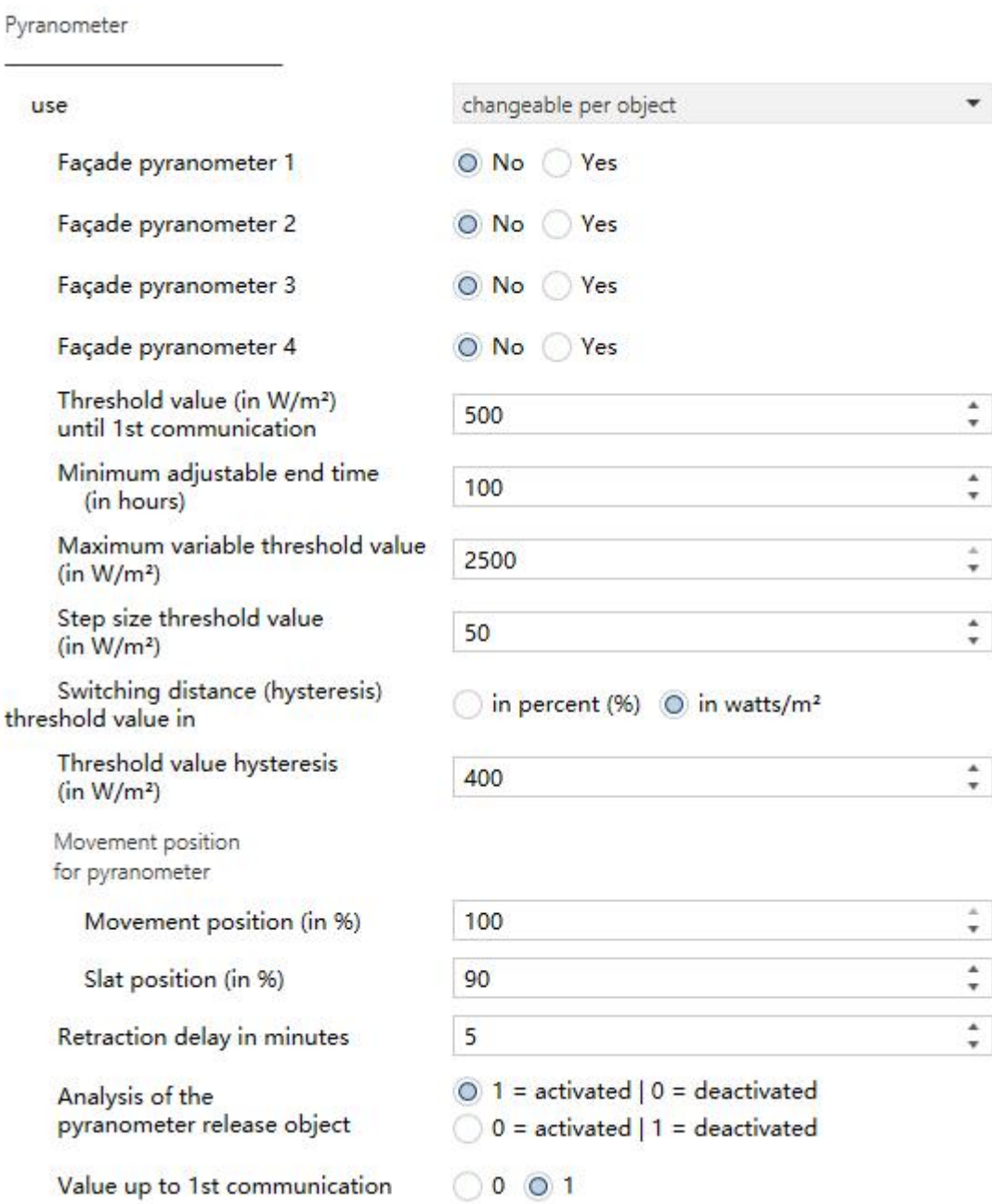



Fig.4.25.2(4) Pyranometer

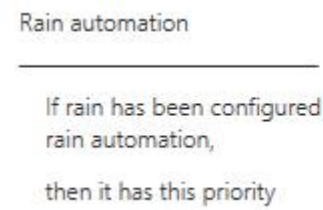


Fig.4.25.2(5) Rain automation

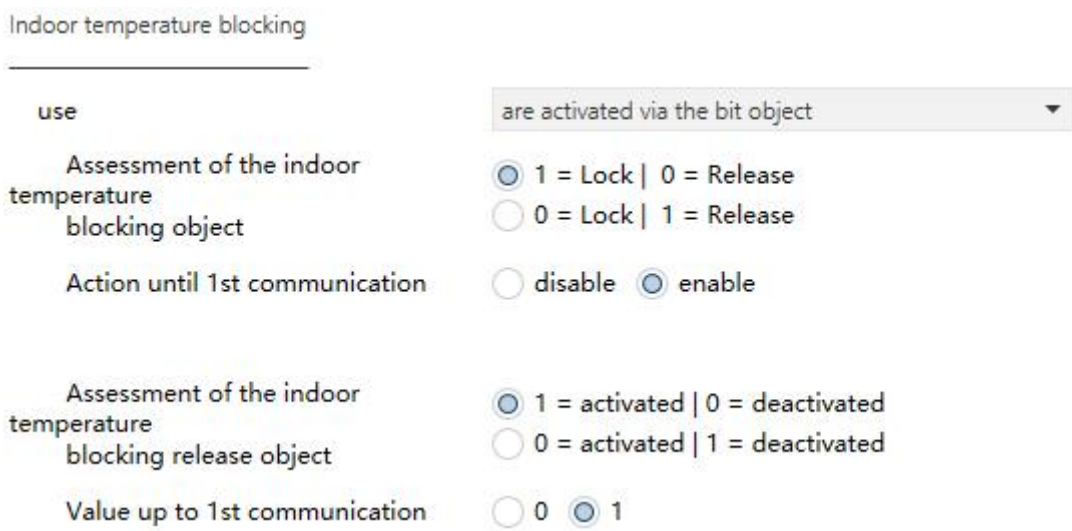
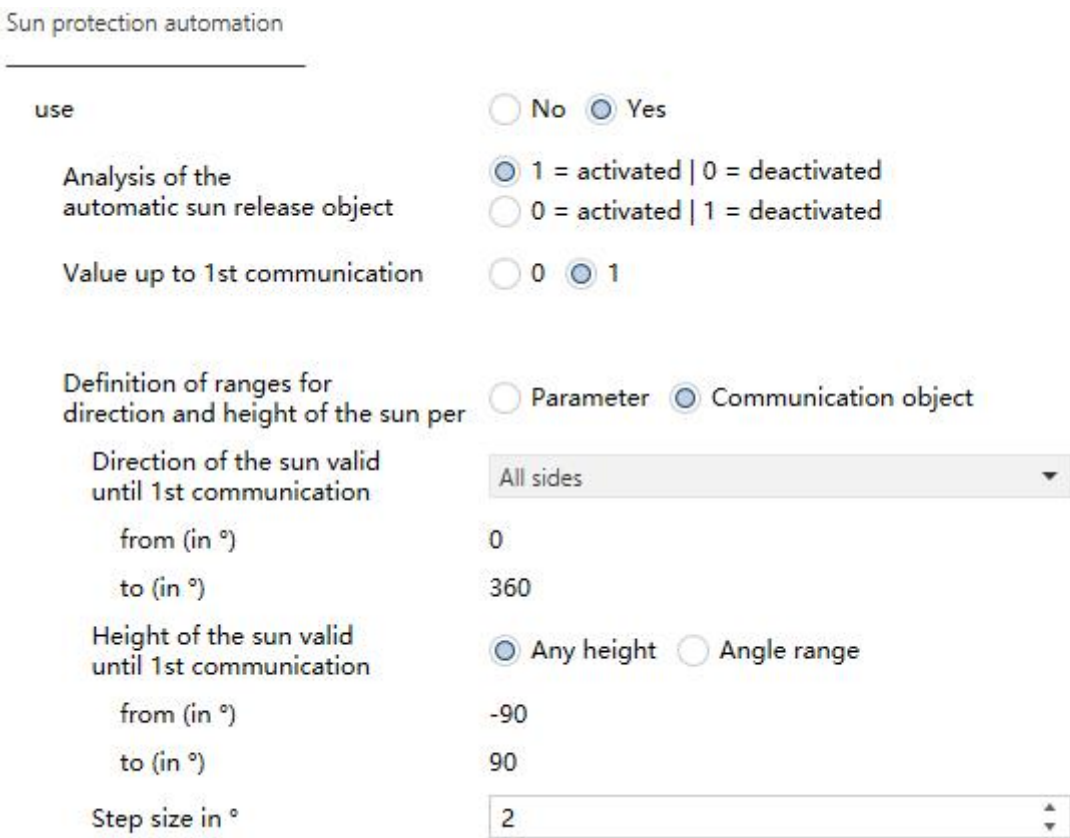
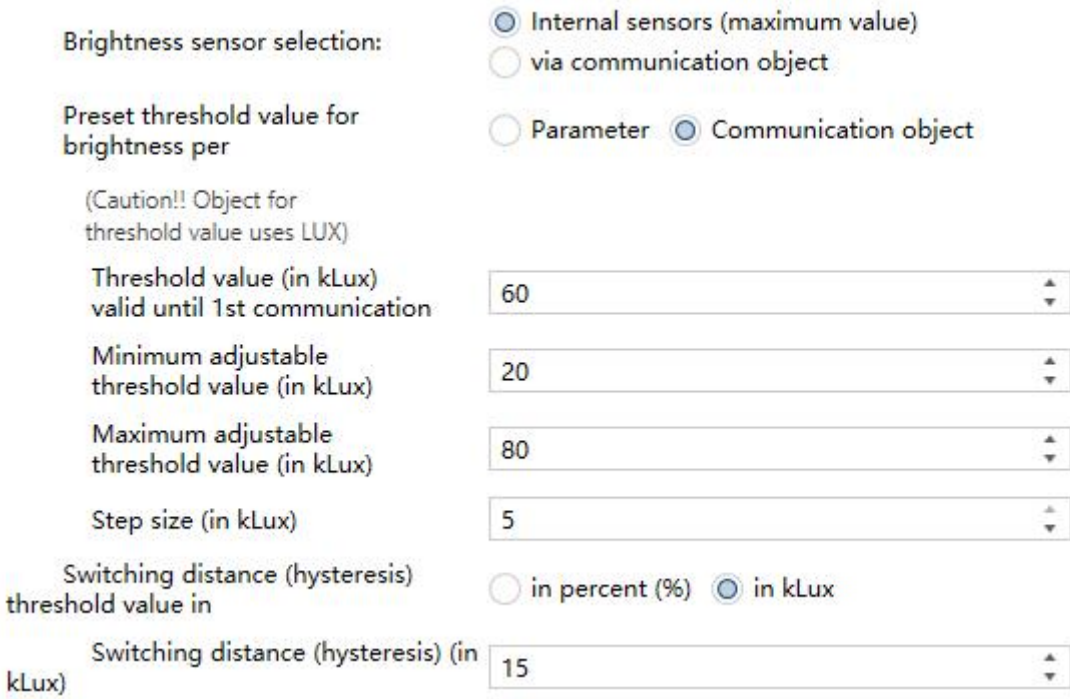



Fig.4.25.2(6) Indoor temperature blocking




Brightness sensor selection:
Internal sensors (maximum value)
via communication object
Preset threshold value for brightness per
Parameter
Communication object
(Caution!! Object for threshold value uses LUX)
Threshold value (in kLux) valid until 1st communication
60
Minimum adjustable threshold value (in kLux)
20
Maximum adjustable threshold value (in kLux)
80
Step size (in kLux)
5
Switching distance (hysteresis) threshold value in
in percent (%)
in kLux
Switching distance (hysteresis) (in kLux)
15

Travel delays

| | |
|---|---|
| Retraction and extension delay is stipulated by | ○ Parameter ◉ Object |
| Extension delay (in minutes) | 1 |
| valid until 1st communication | |
| Minimum adjustable extension delay (in minutes) | 1 |
| Maximum adjustable extension delay (in minutes) | 40 |
| Step size (in minutes) | 1 |
| Brief delay (in seconds) | 10 |
| valid until 1st communication | |
| Minimum short delay (in seconds) | 1 |
| Maximum short delay (in seconds) | 120 |
| Increment (in seconds) | 1 |
| Retraction delay (in minutes) | 30 |
| valid until 1st communication | |
| Minimum retraction delay (in minutes) | 10 |
| Maximum retraction delay (in minutes) | 240 |
| Step size (in minutes) | 1 |

Outdoor temperature block

| | |
|---|---|
| use | changeable per object |

Deactivate blocking at

| | |
|---|---|
| Threshold value (in 0.1°C) valid until 1st communication | 50 |
| Minimum adjustable threshold value per object (in 0.1°C) | 0 |
| Maximum variable threshold value per object (in 0.1°C increments) | 200 |
| Step size for changing threshold value (in 0.1°C) | 5 |
| Switching distance (hysteresis) (in 0.1°C) | 30 |
| Analysis of the outdoor temperature release object | 1 = activated \| 0 = deactivated |
| Value up to 1st communication | ○ 0 ◉ 1 |

Automatic sun protection extends the shading if

- the sun is coming from the set direction and
- brightness exceeds the set threshold value
- longer than the extension delay.

| | |
|---|---|
| Solar protection position | Shadow edge tracking and slat tracking |
| Façade alignment (North=0°,O=90°,S=180°,W=270°) | 180 |
| Inclination of the façade in ° (0° = no inclination) | 0 |
| Window height in cm | 150 |
| Max. penetration depth of sun into the room in cm | 50 |
| Shadow edge displacement at or above ... cm will be tracked | 10 |
| Slat width (in mm) | 80 |
| Slat distance (in mm) | 75 |
| Min. angle change for sending new slat position | 10 |
| Slat angle (in °) after 0% slat movement command | 90 |
| Slat angle (in °) after 100% slat movement command | 10 |

Automatic sun prot. moves shade to the following position if

- brightness falls below threshold value - switching distance
- longer than the short delay.

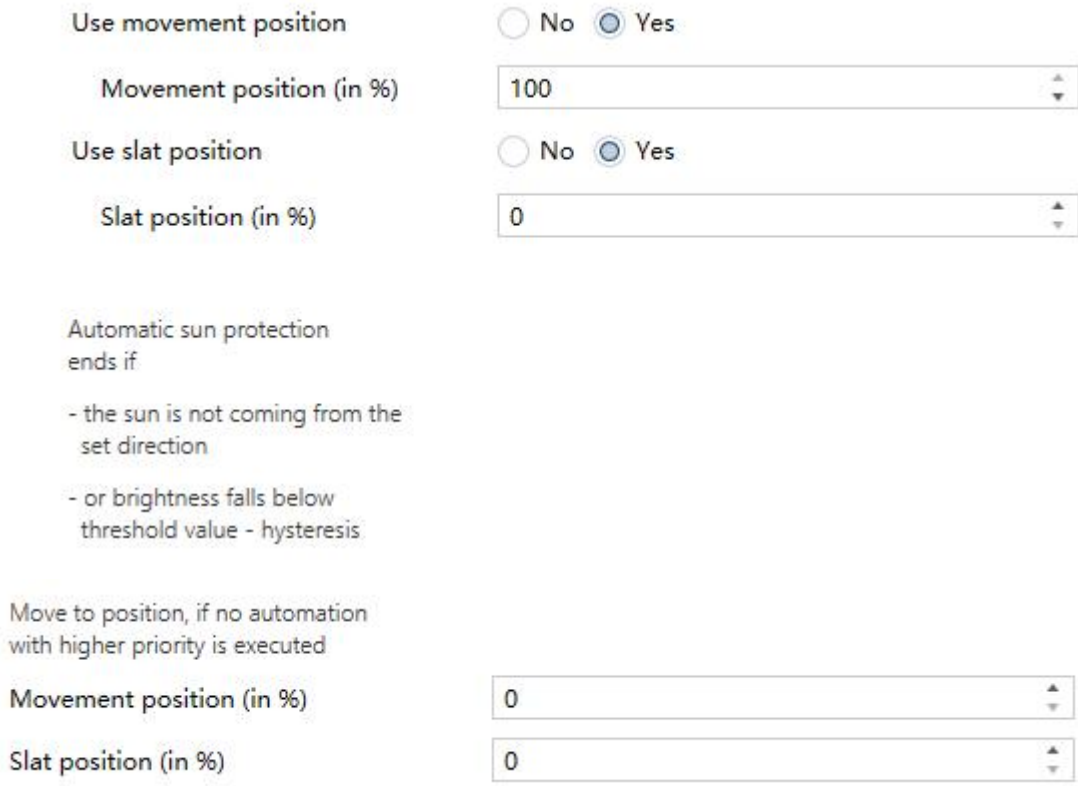



Fig.4.25.2(7) Sun protection automation


Fig.4.25.2(8) Facade status output

**Timed opening**

The curtain can, at certain times, be opened compulsorily or stay open. For time opening, a movement position can be defined.

**Parameter "Use"**

Set whether a time opening is to be used.

Options:

**No**

**Yes**

**Parameters as follow are visible when “Use” is selected “yes”.**

**Used with week time switch**

**Parameter “Period 1/…/24”**

**Parameter “Period 1/2/3/4 Sequence 1/2”**

Set in which periods of the week and the calendar-timer, the time opening movement position is to be approached. The periods are defined in the menu "week timer" or "month timer" (see chapter 4. 27 Weekly timer and chapter 4. 28 Calendar timer).

Options:

**No**

**Yes**

**Position during time opening**

**Parameter “Movement position (in %)”**

**Parameter “Slat position (in %)”**

Set the movement and slat position.

Options: **0...100**

Options: **0...100**

**Parameter “Analysis of the opening time release object”**

**Parameter “Value up to 1st communication”**

Define the value of the release object for time opening. Using the release object, time opening can be deactivated at short-notice.

Options:**1=activated | 0=deactivated/0=activated | 1=deactivated**

Options: **0/1**

**Timed and night closure**

The curtain can, at certain times, and at night, be closed compulsorily. For the time and night closure a movement position can be defined.

**Parameter "use"**

**Parameter "Use timed closure"**

**Parameter "Use night-time closure"**

Set whether a time and/or night closure is to be used.

Options:

**No**

**Yes**

**Parameter "Period 1/.../24"**

**Parameter "Period 1//2/3/4 Sequence 1/2"**

For the timed closure, set in which periods of the week and the calendar-timer, the timed closure movement position is to be travelled to. The periods are defined in the menu "week timer" or "month timer" (see chapter 4. 27 Weekly timer and chapter 4. 28 Calendar timer).

Options:

**No**

**Yes**

**Parameter "Analysis of the time closure release object"**

**Parameter "Value before 1st communication"**

This parameter is visible when parameter “use time closure” is selected “yes” .

Define the value of the release object for the timed closure. Using the release object, the timed closure can be deactivated at short-notice.

Options: **1=activated | 0=deactivated/0=activated | 1=deactivated**

Options: **0/1**

**Parameter "Analysis of the night closure release object"**

**Parameter "Value before 1st communication"**

This parameter is visible when parameter "use night-time closure" is selected "yes" .

Define the value of the release object for the night closure. Using the release object, the night closure can be deactivated at short-notice

Options: **1=activated | 0=deactivated/0=activated | 1=deactivated**

Options: **0/1**

**Parameter "Night and period closure only once"**

**Parameter "Movement position (in %) "**

**Parameter "Slat position (in %) "**

You can define that the time and night closure are only performed once per period/ night. Then also set the movement position.

Options: **No/Yes**

Options: **0...100**

Options: **0...100**

**Heat protection:**

Above a certain outdoor temperature, a heat protection can be travelled to. Further parameters for heat protection are set in the chapter 4.25 "facades" (Heat protection).

If heat protection is used, then, as a precaution, protection is activated, if over a period of 48 hours no change in the measured value has been recorded at the relevant temperature sensor.

**Parameter "Use"**

This parameter is used to set whether use heat protection.

Options:

**No**

**Yes**

### Parameters as follow are visible when “Use” is selected “yes”.

**Heat protection parameters are set in the “Facades” menu**

Parameter “Analysis of the heat protection release object”

Parameter “Value up to 1st communication”

Define the value of the release object. Using the release object, the heat protection can be deactivated at short-notice.

Options: **1=activated | 0=deactivated/0=activated | 1=deactivated**

Options: **0/1**

**Movement position for heat protection**

Parameter “Movement position (in %) ”

Parameter “Slat position (in %) ”

Set the movement and slat position.

Options: **0...100**

**Pyranometer:**

Above a certain global radiation value, a protection position can be taken up.

If global radiation monitoring is used, then, as a precaution, the protection is activated, if over a period of 48 hours no change in the measured value has been recorded at the relevant pyranometer.

Parameter “use”

Set whether the global radiation is to be considered. The threshold value can also be set by "changeable per object".

Options:

**No**

**Yes**

**Changeable per object**

### Parameters as follow are visible when “Use” is no selected “no”.

**Parameter “Facade pyranometer 1/2/3/4”**

This parameter is used to set whether use facade pyranometer 1/2/3/4.

Options:

**No**

**Yes**

**Parameter “Threshold value (in W/m)”**

**Parameter “Switching distance (hysteresis threshold value in)”**

**Parameter “Threshold value hysteresis (in W/m²)”**

Then set the threshold value for the global radiation and the switching distance for the event that the value is not reached.Options: **0...2500**

Options: **In percent(%)/In watts/m²**

Options: **0...2500/0...100**

### Parameters as follow are visible when “use” is selected “changeable per object ”.

**Parameter “Threshold value (in W/m²) until 1st communication”**

**Parameter “Minimum adjustable end time (in hours)”**

**Parameter “Maximum variable threshold value (in W/m²)”**

**Parameter “Step size threshold value (in W/m²)”**

When specifying the threshold value by object the minimum and maximum values that can be set and the increment for the change are also defined.

Options: **0...2500**

Options: **0...2500**

Options: **0...200**

**Movement position for pyranometer**

Parameter "Movement position (in %)"

Parameter "Slat position (in %)"

Parameter "Analysis of the pyranometer release object"

Parameter "Value up to 1st communication"

Set the movement position and define the value of the release object. Using the release object, the pyranometer controller can be deactivated at short-notice.

Options: **0...100**

Options: **0...100**

Options:**1=activated | 0=deactivated/0=activated | 1=deactivated**

Options:**0/1**

**Rain automation**

If rain protection has configured as rain automation, then its priority is between the pyranometer controller and the interior temperature block. Rain automation is set in the general settings of the chapter 4.25 facade ( Rain automation) and chapter 4.25.2 facade X safety (Rain).

**Interior temperature block**

Below a certain interior temperature, the curtain can be prevented from opening.

Parameter "use"

Set whether an interior temperature block is to be used. The threshold value can also be set by "changeable per object".

Options:

**No**

**Yes**

**Changeable per object**

**Are activated via the bit object**

**Parameter "Threshold value (in 0.1°C)"**

**Parameter "Switching distance (hysteresis)(in 0.1°C)"**

This parameter is visible when parameter "use" is selected "yes" and "Changeable per object" .

Then set the threshold value for the temperature block and the switching distance for the event that the value is not reached.

Options: **-32768...32767**

Options: **-200...300**

**Parameter "Minimum adjustable threshold value per object(in 0.1°C)"**

**Parameter "Maximum variable threshold value per object (in 0.1°C increments)"**

**Parameter "Step size for changing threshold value (in 0.1°C)"**

This parameter is visible when parameter "use" is selected "Changeable per object" .

When specifying the threshold value by object the minimum and maximum values that can be set and the increment for the change are also defined.

Options: **-32768...32767**

Options: **-32768...32767**

Options: **1...20**

**Parameter "Assessment of the indoor temperature blocking object"**

**Parameter "Action until 1st communication"**

This parameter is visible when parameter "use" is selected "Are activated via the bit object" .

When specifying the threshold value by bit object the interior temperature block object is also defined.

Options:**1=Lock | 0=Release/0=Lock | 1=Release**

Options:**Disable/Enable**

**Parameter "Assessment of the indoor temperature blocking release object"**

**Parameter "Value up to 1st communication"**

This parameter is visible when parameter "use" is selected "yes" and "Changeable per object" .

Define the value of the release object for the interior temperature block. Using the release object, the interior temperature block can be deactivated at short-notice.

Options:**1=activated | 0=deactivated/0=activated | 1=deactivated**

Options:**0/1**

**Sun protection automation**

If none of the blocks is active, then the position of the sun and the brightness are checked and is, corresponding to the solar protection automation, shaded.

**Parameter "use"**

Set whether solar protection automation is to be used.

Options:

**No**

**Yes**

**Parameters as follow are visible when parameter "use" is selected "yes".**

**Parameter "Analysis of the automatic sun release object"**

**Parameter "Value up to 1st communication"**

Define the value of the release object for solar protection automation. Using the release object, solar protection automation can be deactivated at short notice.

Options:**1=activated | 0=deactivated/0=activated | 1=deactivated**

Options:**0/1**

**Sun position**

Set the direction and height of the sun for shading. The angle, which is specified for the direction of the sun (azimuth), is aligned according to the orientation of the facade.

In addition, the angle of the facade and obstacles which cast a shadow on the facade, such as, for example, a wall or overhanging roof, can also be taken into account in the setting for sun direction (azimuth) and sun height (elevation).

Top view(Fig.1): Sun elevation(Azimuth)

In the morning,the building is fully shaded by surrounding trees.

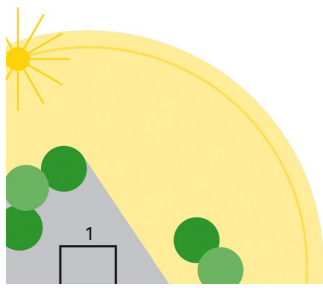



Fig.1

Top view(Fig.2): Sun elevation (Azimuth)

For facade 1, shading must only be active in the azimuth marked red, as the sun can then shine on to the building without obstruction.

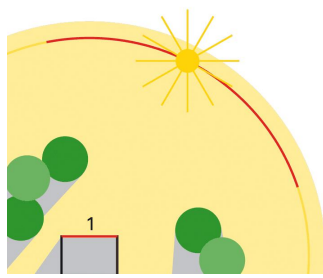
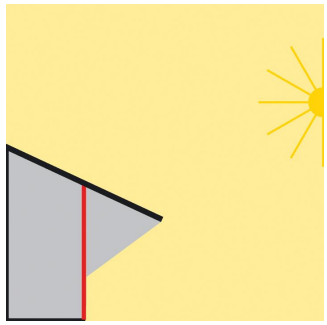



Fig.2

Side view(Fig.3): Sun position (Elevation)

When the sun’s position is high, the facade is only shaded by the roof over hang. Shading is only necessary if the sun is low(in the figure approx.below 53°)。



Parameter "Definition of ranges for direction and height of the sun per"

Select whether the ranges for the direction and height of the sun are to be specified per parameter or via a communication object.

Options:

**Parameter**

**Communication object**

Parameter "Number of ranges for direction and height of the sun"

Parameter "Direction of the sun"

Parameter "From (in)"

Parameter "To(in)"

Parameter "Height of the sun"

Parameter "From (in)"

Parameter "To(in)"

Parameter "Step size in° "

If the ranges are specified by parameter, then several ranges can be specified. Specify the direction for the shading, either with the defined compass direction or with "angle range" and by inputting the values exact to a degree. If the ranges are specified by communication object, then onlyonly the starting values for direction and height are defined, that are valid until the first call.

Options: **1/2/3**

Options: **All sides/West/South-West/South/South-East/East/Angle range**

Options: **0...360**

Options: **0...360**

Options: **Any height/Angle range**

Options: **-90...90**

Options: **-90...90**

Options: **1...10**

**Note: For sun direction and height, a fixed switching distance of 1° is valid**

### Parameter "Brightness sensor selection"

Next you select which brightness value (sensor) is to be relevant for the shading of the facade. The highest currently measured value of the five internal sensors can be used as the brightness value (since this maximum value in conjunction with the position of the sun provides the best basis for shading control, the 5 individual sensor values are not output), or a value that was received via a communication object.

Options:

**Internal sensors(maximum value)**

**Via communication object**

### Parameter "Preset threshold value for brightness per"

Select whether the brightness threshold value is to be specified per parameter or via a communication object. Please observe that the communication object outputs the threshold value in Lux the threshold value, however is set in Kilolux.

Options:

**Parameter**

**Communication object**

Parameter "Threshold value (in kLux)"

Parameter "Threshold value (in kLux) valid until 1st communication"

Parameter "Minimum adjustable threshold value (in kLux)"

Parameter "Maximum adjustable threshold value (in kLux)"

Parameter "Step size (in kLux)"

Parameter "Switching distance (hysteresis) threshold value in"

Parameter "Switching distance (hysteresis) (in kLux)"

Set the brightness threshold value and the switching distance for the event that the value is not reached. If the value is specified via communication object, then a starting value and the possible setting range is defined.

Options: **1...150**

Options: **1...150**

Options: **1...150**

Options: **1...150**

Options: **1...5**

Options:**In percent (%)/In kLux**

Options: **1...150**

**Travel delays**

For the shading there are three travel delays:

The extension delay defines the waiting time for the sun automation after the brightness threshold value has been exceeded.

At the end of the short delay time after the brightness value has not been reached an intermediate position is approached. For example, here a position can be defined that only differs from the shading

position "extended" by the slat position on the shutter. The shade does not immediately go up, but lets in somewhat more light. This position is set further down in the same menu.

The retraction delay defines the waiting time for the retraction after the brightness threshold value has not been reached.

**Parameter "Retraction and extension delay is stipulated by"**

Select whether the travel delay is to be specified per parameter or via objects.

Options:

**Parameter**

**Object**

**Parameter "Extension delay (in minutes)"**

**Parameter "Minimum adjustable extension delay (in minutes)"**

**Parameter "Maximum adjustable extension delay (in minutes)"**

**Parameter "Step size (in minutes)"**

**Parameter "Brief delay (in seconds)"**

**Parameter "Minimum short delay (in seconds)"**

**Parameter "Maximum short delay (in seconds)"**

**Parameter "Increment (in seconds)"**

**Parameter "Retraction delay (in minutes)"**

**Parameter "Minimum retraction delay (in minutes)"**

**Parameter "Maximum retraction delay (in minutes)"**

**Parameter "Step size (in minutes)"**

Set the delay times. If the delays are specified via communication object, then a starting value and the possible setting range is defined.

Options: **1...240**

Options: **1...240**

Options: **1...240**

Options: **1...10**

Options: **1...3600**

Options: **1...3600**

Options: **1...3600**

Options: **1...240**

Options: **1...240**

Options: **1...240**

Options: **1...240**

Options: **1...10**

**Outdoor temperature block**

Below a certain outdoor temperature, the shade is withdrawn.

If the outdoor temperature block is used, then, as a precaution, the block is activated, if over a period of 48 hours no change in the measured value has been recorded at the relevant temperature sensor.

**Parameter "use"**

Set whether an outdoor temperature block is to be used. The threshold value can also be set by "changeable per object".

Options:

**No**

**Yes**

**Changeable per object**

**Parameter "Threshold value (in 0.1°C)"**

**Parameter "Switching distance (hysteresis) (in 0.1°C)"**

This parameter is visible when parameter "use" is selected "yes".

Then set the threshold value for the temperature block and the switching distance for the event that the value is exceeded.

Options: **-200...300**

**Parameter "Threshold value (in 0.1°C) valid until 1st communication"**

**Parameter "Minimum adjustable threshold value per object (in 0.1°C)"**

**Parameter "Maximum variable threshold value per object (in 0.1°C increments)"**

**Parameter "Step size for changing threshold value (in 0.1°C)"**

This parameter is visible when parameter "use" is selected "changeable per object".

When specifying the threshold value by object the minimum and maximum values that can be set and the increment for the change are also defined.

Options: **-200...300**

Options: **-200...300**

Options: **-200...300**

Options: **1...20**

**Parameter "Analysis of the outdoor temperature release object-"**

**Parameter "Value up to 1st communication"**

Define the value of the release object for the outdoor temperature block. Using the release object, the outdoor temperature block can be deactivated at short-notice.

Options: 1=activation | 0=deactivation/0=activation | 1=deactivationOptions: **0/1**

**Solar protection position and auto-guiding**

Solar protection extends the shading automatically if the sun is coming from the set direction and the brightness of the set threshold value is exceeded over a period longer the extension delay time.

For the movement position "Solar protection" auto-guiding can be set. Settings for slats are only displayed if the shading for the facade has been defined as having slats (see chapter 4.25.1 facade safety).

Without auto-guiding a fixed position is travelled to.

With a four step slat guiding concept, a defined movement position is travelled to and the slats are tilted in four steps according to the position of the sun.

For slat auto-guiding, the direction and slant of the facade are taken into account, and internally the angle of the slat so calculated that no direct light can shine through the slats.

For shadow edge tracking, a fixed slat position is set (only for shades with slats). For the movement position, the orientation and slant of the facade and the height of the window are taken into consideration so that it can be defined how far the sun may shine into the room.

Shadow edge tracking and slat auto-guide are also possible in combination.

Before setting auto-guide, please read the instructions in chapter Optimal usage of facade controller functions.

**Parameter "Solar protection position"**

This parameter is used to set the solar protection position.

Options:

**Without tracking**

**Slats in 4 stages**

**Slat tracking**

**Shadow edge tracking**

**Shadow edge tracking and Slat tracking**

Parameter "Movement position (in %)"

Parameter "Slat position (in %)"

This parameter is visible when parameter "Solar protection position" is selected "Without tracking".Without auto-guiding a fixed position is travelled to.

Options: **0...100**

Parameter "Range 1 (0°-x°)"

Parameter "Range 2 (x°-y°)"

Parameter "Range 3 (y°-z°)"

Parameter "Range 4 (z°-90°)"

Parameter "with x"

Parameter "with y"

Parameter "with z"

This parameter is visible when parameter "Solar protection position" is selected "Slats in 4 stages".With the four step slat guiding the fixed movement position and the four slat angles are defined (only for shades with slats).

Options: **0...100**

Options: **0...90**

Parameter "Movement position (in %)"

Parameter "Facade alignment (North = 0°,O=90°, S=180°, W=270°)"

Parameter "Inclination of the facade in °(0°=no inclination) "

Parameter "Slat orientation"

Parameter "Slat width (in mm)"

**Parameter "Slat distance (in mm)"**

**Parameter "Min.angle change for sending new slat position"**

**Parameter "Slat angle (in°) after 0% slat movement command"**

**Parameter "Slat angle (in°) after 100% slat movement command"**

For the slat guiding the fixed movement position and the characteristics of the facade and the slats are specified (only for shades with slats). The device calculates the ideal slat position, so that no direct light can enter through the slats, but such that, at all times, as much indirect light as possible lights up the room.

With the setting for the minimum change of angle for transmission of a movement command, the "increment" respectively the frequency of the angle correction can be adjusted. Hereby, the technical possibilities of the drive used must be taken into consideration. The minimum change of angle is taken into account in the device internal calculation, so that direct sunlight can be prevented, even for large steps.

The slat angle at 0% move command and at 100% move command must, during commissioning, be aligned to the pre-settings of the parameters, and, if necessary, corrected, so that the slat guide on the facade works properly. For this purpose, observe chapter 4.25.1.5 Slat position for horizontal slats and chapter 4.25.1.6 Slat position for vertical slats.Options: **0...360**

Options: **-90...90**

Options: **Horizontal/Vertical**

Options: **0...1000**

Options: **0...1000**

Options: **0...90**

Options: **1...180**

Options: **1...180**

Parameter "Movement position (in %)"

Parameter "Facade alignment (North = 0°,O=90°, S=180°, W=270°)"

Parameter "Inclination of the facade in °(0°=no inclination) "

Parameter "Window height in cm"

Parameter "Max.penetration depth of sun into the room in cm"

Parameter "Shadow edge displacement at or above ... cm will be tracked"

For the shadow edge auto-guide a fixed slat position is set (only for shades with slats). For the movement position the orientation and angle of the facade and the height of the windows (glass height) are specified. The device calculates the ideal position so that the specified maximum depth of penetration into the room for the sun, is not exceeded.

Using the setting for, from which shadow edge shift, in centimetres, a move command is to be transmitted, the frequency of the position correction can be adjusted. Hereby, the technical possibilities of the drive used must be taken into consideration.

See also chapter 4.25.1.3 Shadow edge tracking and slat tracking.Options: **1...100**

Options: **0...360**

Options: **-90...90**

Options: **0...1000**

Options: **10...250**Options: **1...50**

**Note: The slant of the facade and the angle set for the height of the sun should be compatible. Thus, if the facade is slanted forwards by 10°, then the sun only needs to be considered up to a height of 80°. Enter this separately with the parameters the parameter for sun direction and height (see chapter 4.25.2 solar protection automation, Sun position).**

**Intermediate position for the short retraction delay time**

Solar protection automation moves to the "short delay" position if the shading has been extended by the solar protection automation and the brightness is then below the value (threshold value - switching distance) for longer than the short delay time.

**Parameter "Use movement position"**

**Parameter "Movement position (in %)"**

**Parameter "Use slat position"**

**Parameter "Slat position (in %)"**

For the movement position "short retraction delay" a movement position and a slat position can be set. Settings for slats are only displayed if the shading for the facade has been defined as having slats (see chapter 4.25.1 facade safety).

Options: **No/Yes**

Options: **0...100**

Options: **No/Yes**

Options: **0...100**

**Parameter "Movement position (in %)"**

**Parameter "Slat position (in %)"**

Standard movement position.

Solar protection automation is terminated and the standard position is approached.

1.the sun is not coming from the set shading direction

2.the brightness is then below the value (threshold value - switching distance)

3.for longer than the time (short delay + retraction delay time).

Settings for slats are only displayed if the shading for the facade has been defined as having slats (see chapter 4.25.1 facade safety).

Options: **0...100**

**Facade status output**

Information on the various possibilities for the status output can be found in chapter 4.25.1.8 Status output. In principal the status output is a singular function, but, in compact form, possible for singular and for all facades possible. The texts for the output in compact form are defined in the general settings for the facade (see chapter 4.25.1.8 Status output).

**Parameter "Analysis of the facade status release object"**

**Parameter "Value up to 1st communication"**

Set which value in the status release object for this facade means active respectively in active.

Options: **1=activated | 0=deactivated/0=activated | 1=deactivated**

Options: **0/1**

## 4.26 Parameter window “Computer”

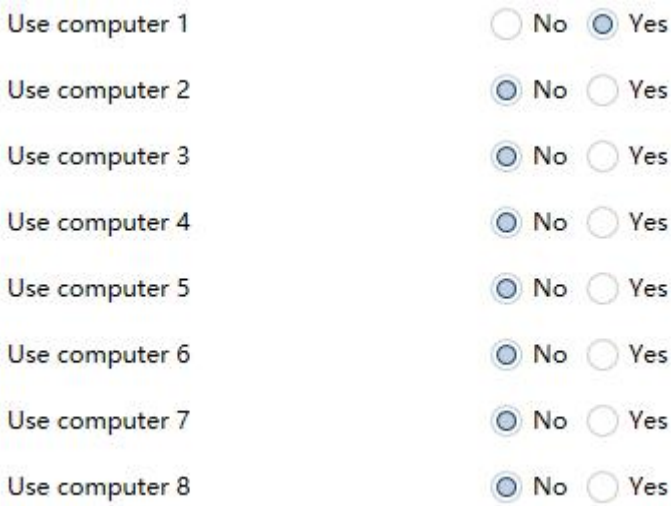



Fig.4.26 Parameter window “Computer”

**Parameter “Use computer 1/.../8”**

Activate the multi-functional computer, with which the input data can be changed by calculation, querying a condition or converting the data point type. The menus for the further setting of the computer are then displayed.

Options:

**No**

**Yes**

### 4.26.1 Parameter window “Computer 1/.../8”

Maintain the

input values received via communication objects: not

Function (I = Input): Condition: I1 = I2

Input type: 1 bit

Start value I1: 0

Start value I2: 0

Output type: 1 bit

Output value O1

- if the condition is met: 0
- if the condition is not met: 0
- if the monitoring period is exceeded: 0
- if blocked: 0

Output value O2

- if the condition is met: 0
- if the condition is not met: 0
- if the monitoring period is exceeded: 0
- if blocked: 0

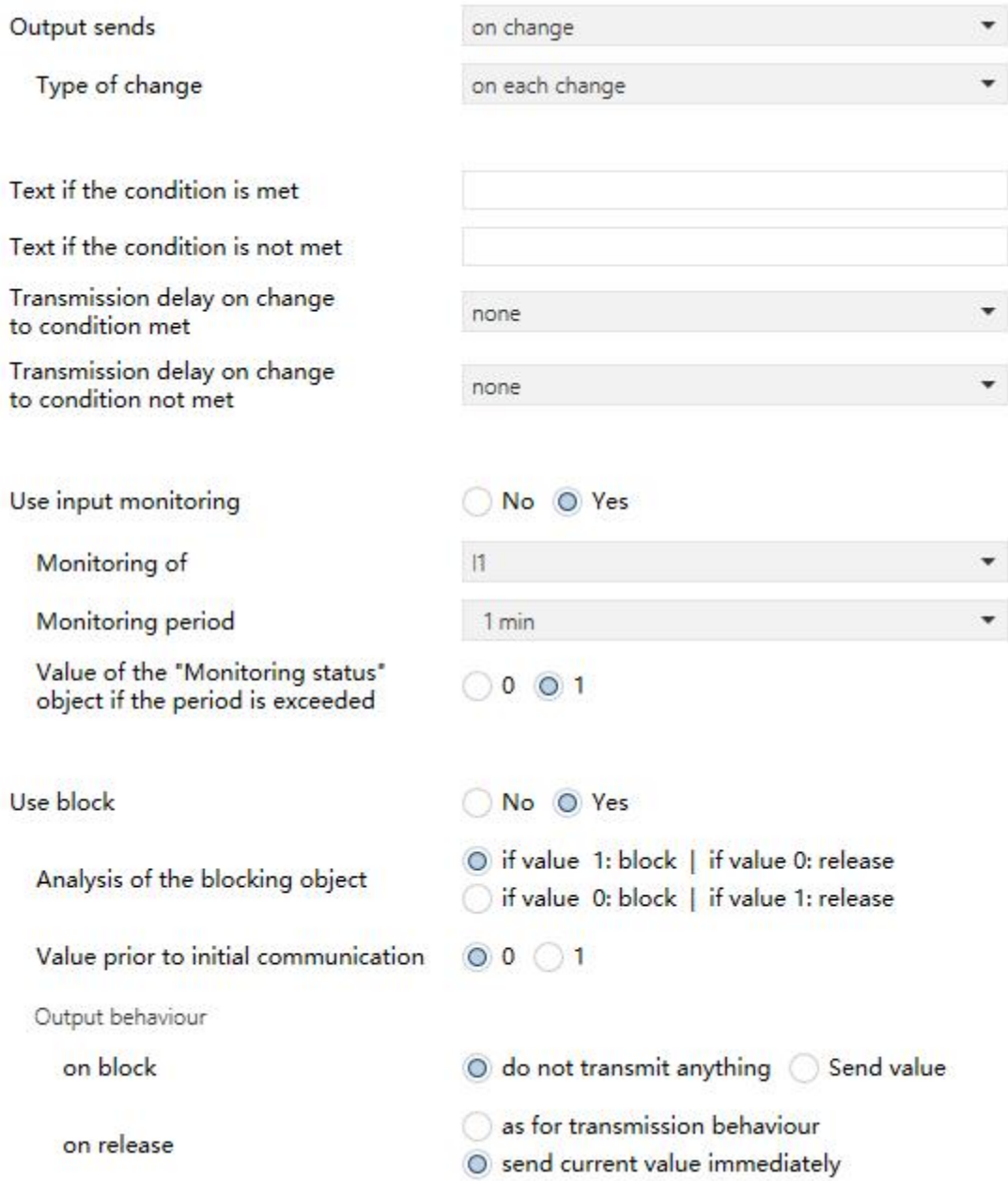



Fig.4.26.1 Parameter window “Computer 1/.../8”

## Parameter “input values received via communication objects”

Set, in which cases input values received are to be kept per object.

Options:

**Not**

**After power supply restoration**

**After power supply restoration and programming**

**Note: The setting "After power restoration and programming" should not be used for the initial start-up, as the factory settings are always used until the first call (setting via objects is ignored).**

**Parameter "Function (I=Input)"**

**Parameter "Input type"**

**Parameter "Tolerance for comparison"**

**Parameter "Start value |1/2/3"**

Select the function set the input mode and starting values for input 1/2/3.

Options: **Condition: |1=|2/Condition: |1>|2/.../Transformation: General**

Options: **1 bit/1 byte (0..255)/.../4byte floating point**

Options: **0...100**

Options: **0...100**

**Parameter "Output type"**

**Parameter "if the condition is met"**

**Parameter "if the condition is not met"**

**Parameter "if the monitoring period is exceeded"**

**Parameter "if blocked"**

When querying the prerequisites set the output type and output values at different statuses:

Options: **1 bit/1 byte (0..255).../4byte counter with math.symbol/4byte floating point**

Options: **0...65535**

**Parameter "Output sends"**

**Parameter "Type of change"**

**Parameter "Send cycle"**

Set the output send pattern.

Options: **On change/On change and after reset/.../When receiving an input object an periodically**

Options: **On each change/On change to condition met/On change to condition not met**

Options: **5sec/10s/.../1.5h/2h**

**Parameter "Text if the condition is met"**

**Parameter "Text if the condition is not met"**

Set the text to be displayed for conditions met / not met.Free text max.14 chars.

**Parameter "Transmission delay on change to condition met"**

**Parameter "Transmission delay on change to condition not met"**

If applicable set the send delays.

Options:

**None**

**1sec**

**...**

**1h**

**2h**

**Parameter "Use input monitoring"**

**Parameter "Monitoring of"**

**Parameter "Monitoring period"**

**Parameter "Value of the "Monitoring status" object if the period is exceeded"**

If necessary, activate the input monitoring. Set which inputs are to be monitored, at which intervals the inputs are to be monitored and what value the "monitoring status" should have, if the monitoring period is exceeded without feedback.

Options: **No/Yes**

Options: **|1/|2/|1 and |2**

Options: **5sec/10sec/.../1h/2h**

Options: **0/1**

**Parameter "Use block"**

With the help of the "Blocking" input object, the switching output can be blocked, e.g. by a manual command (push button).

Options:

**No**

**Yes**

## Parameters as follow are visible when "use block" is selected "yes".

**Parameter "Analysis of the blocking object"**

This parameter is used to set what a 1 or 0 at the block entry means.

Options:

**If value 1:block | if value 0: release**

**If value 0:block | if value 1: release**

**Parameter "Value prior to initial communication"**

An object value up to the 1st communication is specified here.

Options: **0/1**

**Parameter "on block"**

**Parameter "on release"**

The behaviour of the switching output during locking/release can be set.

Options: **Do not transmit anything/Send value**

Options: **As for transmission behaviour/Send current value immediately**

### 4.27 Parameter window “Weekly time switch”

In the weekly timer in the device 24 periods can be defined. These periods are, for example, used for the internal automatic function timed opening and timed closure.

The respective period objects can be configured as inputs or outputs, i.e. send to the bus (timer internal, use internal and for other bus members) or be switched from there (timer function via an external device). If several devices are used in the system, the timer settings may be done on one device that sends the period objects as output. The other devices take over the timer-command (input), whereby a better synchronisation is achieved.

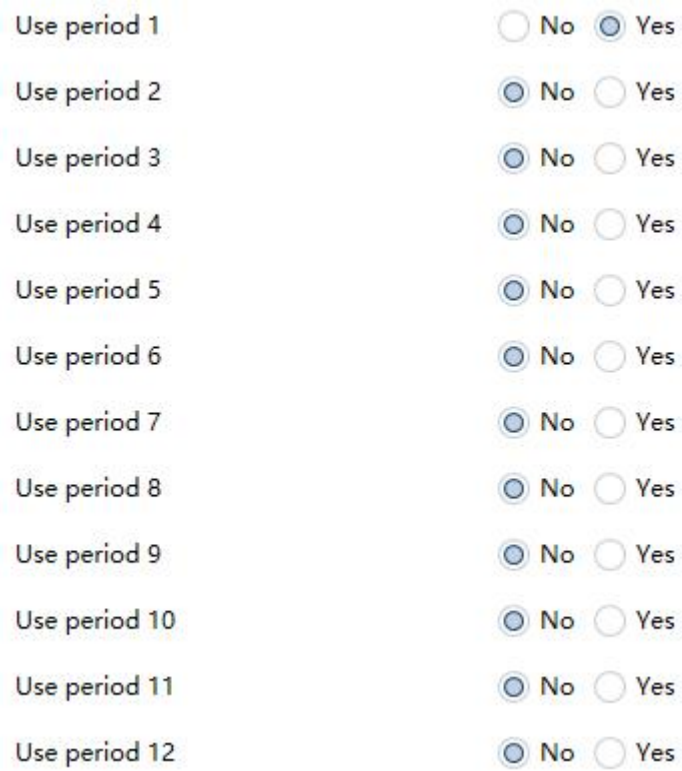


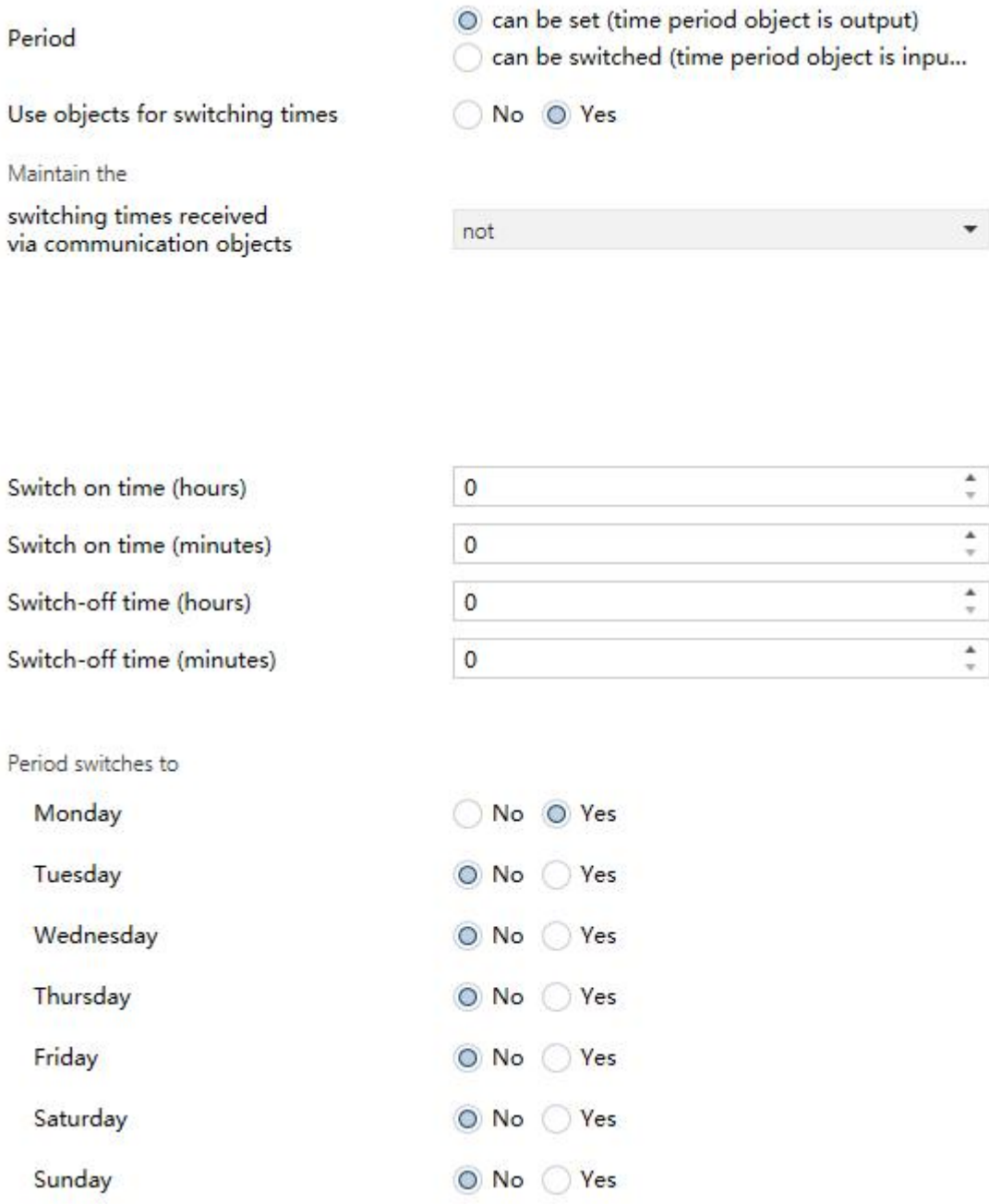

Fig.4.27 Parameter window “Weekly time switch”

**Parameter “Use period 1/.../24”**

Activate the required periods for the weekly timer.

Options:**No/Yes**

### 4.27.1 Parameter window “Period 1/.../24”



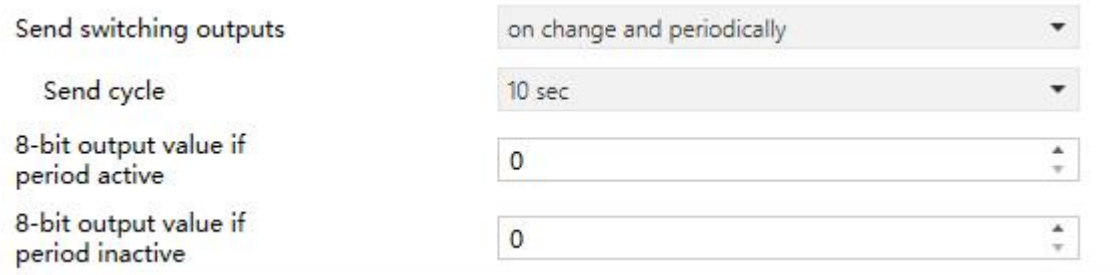



Fig.4.12.1(1) Parameter window “Period 1/.../24_can be set(time period object is output)”

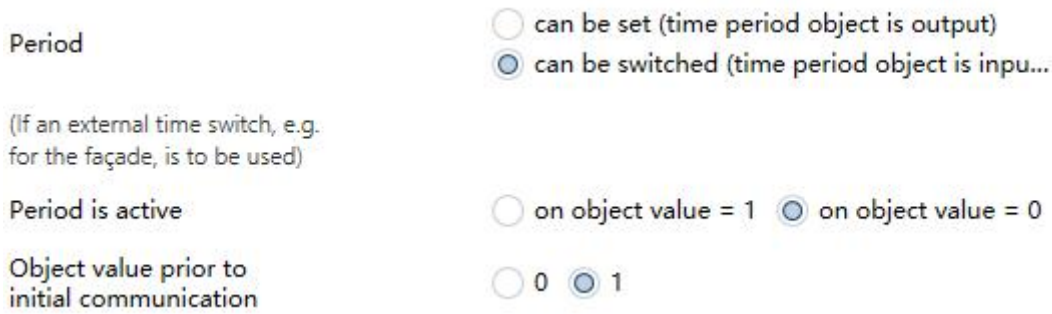



Fig.4.12.1(2) Parameter window “Period 1/.../24_can be switched(time period object is input)”

**Parameter “Period”**

Set whether the period can be set (period object is the output and is sent to the bus) or if the period is received externally via the bus (period object is the input).

Options:

**Can be set(time period object is output)**

**Can be switched(time period object is input)**

**Parameter “Use objects for switching times”**

**Parameter “switching times received via communication objects”**

Set whether the switching times are set per object and in which cases the switching times received are to be retained.

Options: **No/Yes**

Options: **Not/After power supply restoration/After power supply restoration and programming**

**Note: The setting "After power restoration and programming" should not be used for the initial start-up, as the factory settings are always used until the first call (setting via objects is ignored).**

**Parameter "Switch on time (hours)"**

**Parameter "Switch on time (minutes)"**

**Parameter "Switch-off time (hours)"**

**Parameter "Switch-off time (minutes)"**

**Parameter "Monday"**

**Parameter "Tuesday"**

**Parameter "Wednesday"**

**Parameter "Thursday"**

**Parameter "Friday"**

**Parameter "Saturday"**

**Parameter "Sunday"**

Set the switching on and off times and the days of the week for this period. If, for example, 15:35 is set as the switch-off time, the output switches off on the change from 15:35 to 15:36.

Options: **0...23**

Options: **0...59**

Options: **0...23**

Options: **0...59**

Options: **No/Yes**

**Parameter "Send switching outputs"**

**Parameter "Send cycle"**

**Parameter "8-bit output value if period active"**

**Parameter "8-bit output value if period inactive"**

Set the send pattern for the week clock switch output and the value of the 8-bit output.

Options: **not/on change/.../ on change to inactive and periodically**

Options: **5sec/10s/.../1.5h/2h**

Options: **0...255**

Options: **0...255**

### 4.28 Parameter window “Calendar time switch”

In the calendar timer in the device, four periods with two switching sequences can be defined. These periods are, for example, used for the internal automatic function timed opening and timed closure.


Fig.4.28 Parameter window “Calendar time switch”

**Parameter “Period 1/2/3/4”**

This parameter sets whether use period 1/2/3/4.

Options:

**Not active**

**Active**

### 4.28.1 Parameter window “Period 1/2/3/4”

| | |
|---|---|
| Use objects for switching and switching times | ○ No ◉ Yes |
| Maintain the switching data and times received via communication objects | not |
| From: | |
| Month | January |
| Day | 1 |
| Up to and including: | |
| Month | December |
| Day | 1 |
| Sequence 1: | |
| Switch on time (hours) | 0 |
| Switch on time (minutes) | 0 |
| Switch-off time (hours) | 0 |
| Switch-off time (minutes) | 0 |
| Send switching outputs | on change to inactive and periodically |
| Send cycle | 10 sec |
| 8-bit output value if sequence active | 0 |
| 8-bit output value if sequence inactive | 0 |

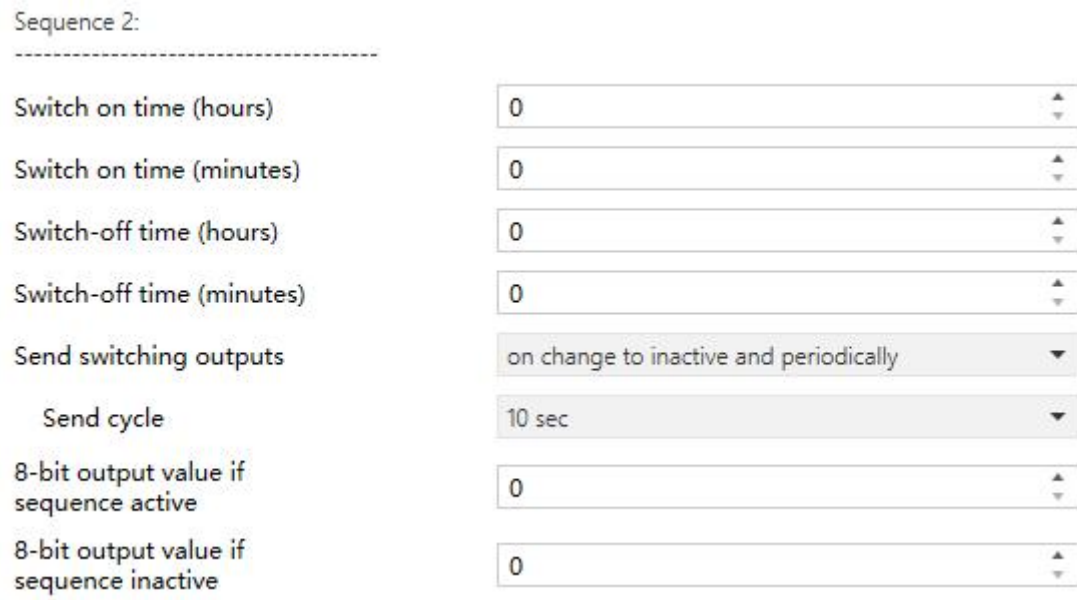



Fig.4.11.1 Parameter window “Period 1/2/3/4”

**Parameter “Use objects for switching and switching times”**

**Parameter “switching data and times received via communication objects”**

Set whether the switching date and the switching time are set per object and in which cases the switching dates and times received are to be retained.

Options: **No/Yes**

Options: **Not/After power supply restoration/After power supply restoration and programming**

**Note: The setting "After power restoration and programming" should not be used for the initial start-up, as the factory settings are always used until the first call (setting via objects is ignored).**

**From/Up to and including:**

**Parameter “Month”**

**Parameter “Day”**

The start date and end date are defined.

Options: **January/February/.../November/December**

Options: **1...31**

**Sequence 1/2**

**Parameter "Switch on time (hours)"**

**Parameter "Switch on time (minutes)"**

**Parameter "Switch-off time (hours)"**

**Parameter "Switch-off time (minutes)"**

A sequence sets the switch-on and switch-off time for each day of the set period.

Options: **0...23**

Options: **0...59**

Options: **0...23**

Options: **0...59**

**Parameter "Send switching outputs"**

**Parameter "Send cycle"**

**Parameter "8-bit output value if sequence active"**

**Parameter "8-bit output value if sequence inactive"**

Set the send pattern for the switch sequence and the value of the 8-bit output.

Options:**not/on change/ on change to active/ .../on change to inactive and periodically**

Options:**5sec/10s/.../1.5h/2h**

Options: **0...255**

## 4.29 Parameter window “Logic”

The device has 16 logic inputs, eight AND and eight OR logic gates.

| | |
|---|---|
| Use logic inputs | ○ No ◉ Yes |
| Object value before 1. communication for: | |
| - Logic input 1 | ○ 0 ◉ 1 |
| - Logic input 2 | ◉ 0 ○ 1 |
| - Logic input 3 | ◉ 0 ○ 1 |
| - Logic input 4 | ◉ 0 ○ 1 |
| - Logic input 5 | ◉ 0 ○ 1 |
| - Logic input 6 | ◉ 0 ○ 1 |
| - Logic input 7 | ◉ 0 ○ 1 |
| - Logic input 8 | ◉ 0 ○ 1 |
| - Logic input 9 | ◉ 0 ○ 1 |
| - Logic input 10 | ◉ 0 ○ 1 |
| - Logic input 11 | ◉ 0 ○ 1 |
| - Logic input 12 | ◉ 0 ○ 1 |
| - Logic input 13 | ◉ 0 ○ 1 |
| - Logic input 14 | ◉ 0 ○ 1 |
| - Logic input 15 | ◉ 0 ○ 1 |
| - Logic input 16 | ◉ 0 ○ 1 |

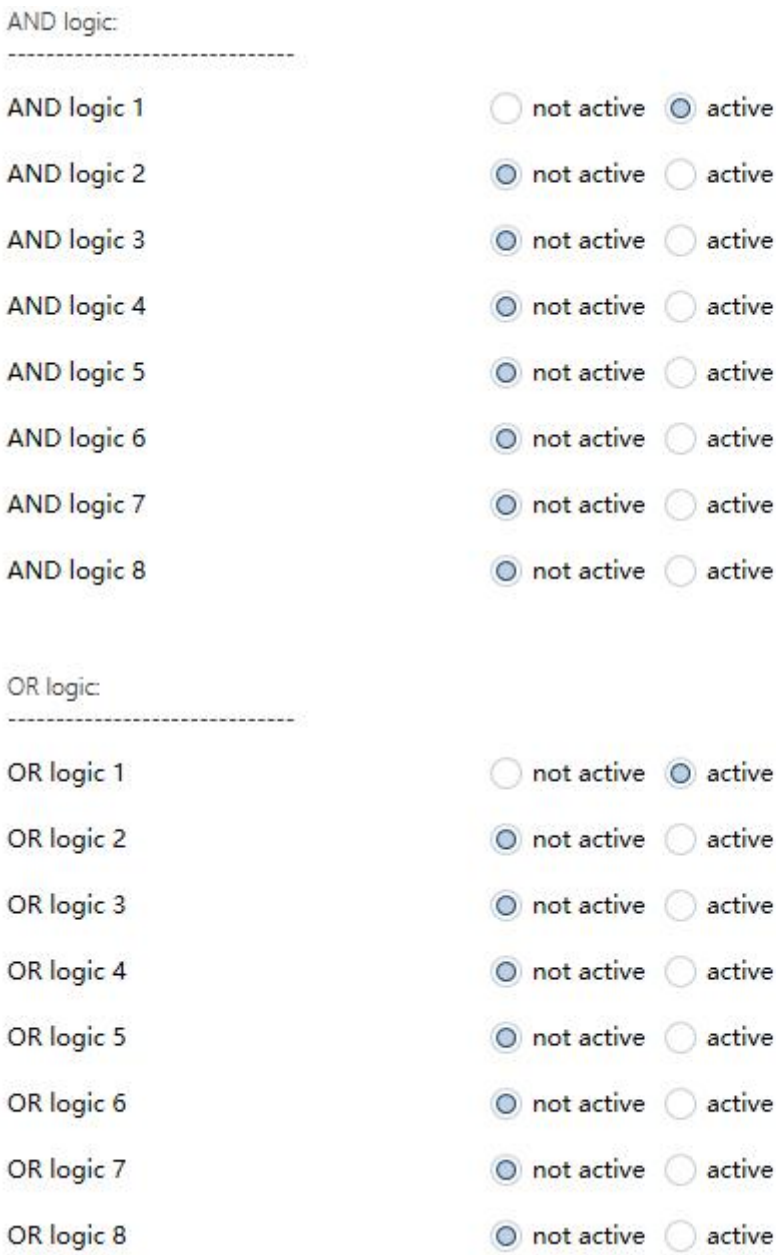



Fig.4.29 Parameter window “Logic”

## Parameter “Use logic inputs”

This parameter is used to set whether use logic inputs.Options:

**No**

**Yes**

**Object value before 1. communication for:**

**Parameter "-Logic input 1/.../16"**

This parameter is visible when previous parameter is selected "yes ".

The device has 16 logic inputs, 8 AND and 8 OR logic gates.

For each logic input, the object value can be assigned before the first communication, which is used for the initial commissioning and when the voltage returns.

Options:

**0**

**1**

**AND/OR logic**

**Parameter "AND logic 1/.../6"**

**Parameter "OR logic 1/.../6"**

This parameter is used to set whether active and/or logic.

Options:

**not active**

**active**

### 4.29.1 Parameter window “AND/OR logic 1/.../8”

| | |
|---|---|
| 1st input | do not use |
| 2nd input | do not use |
| 3rd input | do not use |
| 4th input | do not use |
| Output type | ○ one 1 bit object ◉ two 8 bit objects |
| Object type | Value (0 ... 255) |
| Object A output value if logic = 1 | 1 |
| Object B output value if logic = 1 | 1 |
| Object A output value if logic = 0 | 0 |
| Object B output value if logic = 0 | 0 |
| Object A output value if blocking active | 0 |
| Object B output value if blocking active | 0 |
| Object A output value if monitoring time exceeded | 0 |
| Object B output value if monitoring time exceeded | 0 |
| Transmission behaviour | on change of logic + receipt of obj.+ periodically |
| Send cycle | 10 sec |

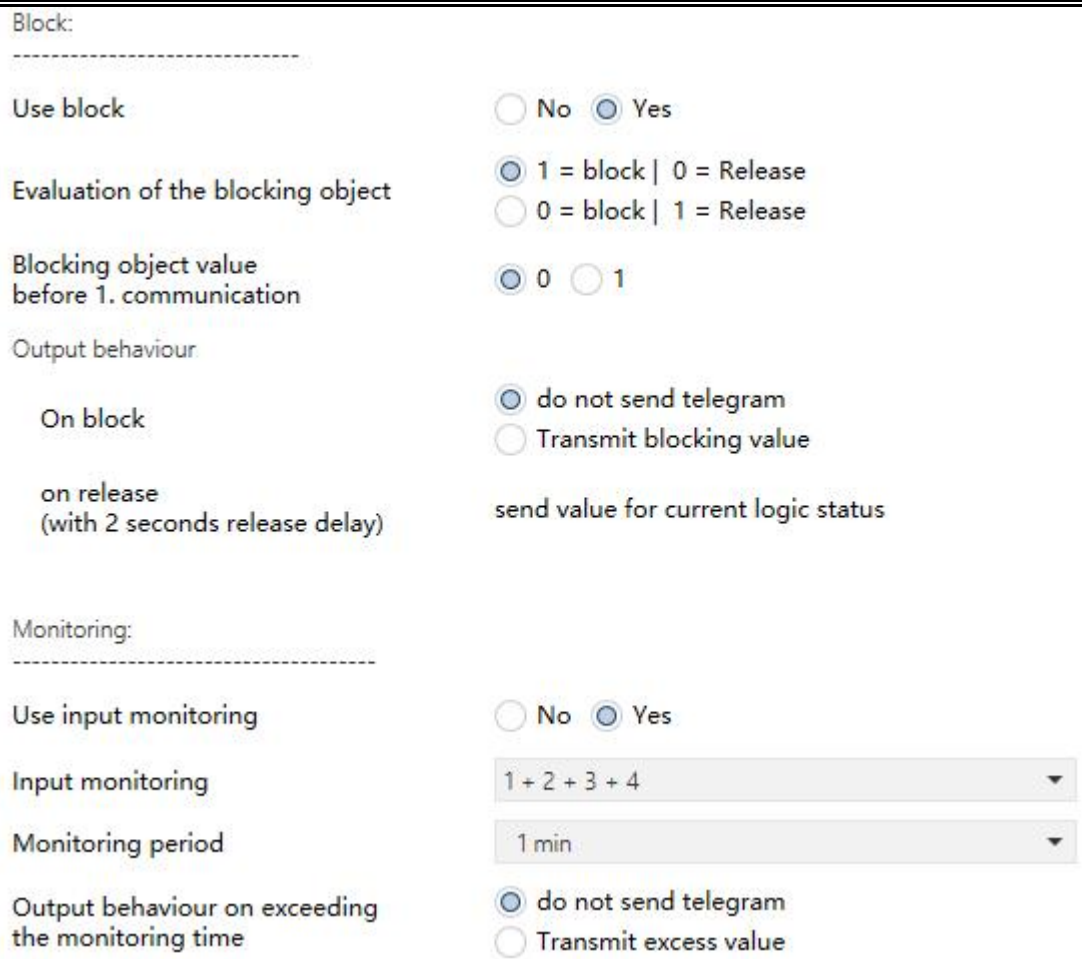



Fig.4.29.1 Parameter window “AND logic 1/.../8”

**Parameter “1st input”**

**Parameter “2nd input”**

**Parameter “3rd input”**

**Parameter “4th input”**

Four inputs can be defined for each logic gate.Options:

**Do not use**

**Logic input 1...16**

**Logic input 1...16 inverted**

**GPS Malfunction = ON**

**GPS Malfunction = OFF**

**Temperature sensor malfunction = ON**

**Temperature sensor malfunction = OFF**

**...**

**Weekly clock OR 1...4**

**Weekly clock OR 1...4 inverted**

**Parameter "Output type"**

Each logic output can transmit one 1-bit or two 8-bit objects.

Options:

**one 1 bit object**

**two 8 bit objects**

**Parameters as follow are visible when parameter "logic output sends" is selected "one 1 bit object".**

**Parameter "Output value If logic = 1"**

**Parameter "Output value If logic = 0"**

**Parameter "Output value If blocking active"**

**Parameter "Output value If monitoring time exceeded"**

If the output type is a 1-bit object, set the output values for the various conditions.

Options: **0...1****Parameters as follow are visible when parameter "logic output sends" is selected "two 8 bit objects".**

**Parameter "Object type"**

**Parameter "Object A output value If logic = 1"**

**Parameter "Object B output value If logic = 1"**

Parameter "Object A output value If logic = 0"

Parameter "Object B output value If logic = 0"

Parameter "Object A output value If blocking active"

Parameter "Object B output value If blocking active"

Parameter "Object A output value If monitoring time exceeded"

Parameter "Object B output value If monitoring time exceeded"

If the output type is two 8-bit objects, set the type of object and the output values for the various conditions.

Options:**Value (0...255)/Percent (0%...100%)/Angle (0 ° ...360 ° )/Scene call-up (0...63)**Options:**0...255/0%...100%/0°...360°/0...63**

Parameter "Transmission cycle"

Set the output send pattern.

Options: **on change of logic/.../ On change of logic + receipt of object + periodically**

Options: **5sec/10s/.../1.5h/2h**

**Blocking:**

Parameter "Use block"

This parameter is used to set whether activate the block for the logic output。

Options:

**No**

**Yes**

**Parameters as follow are visible when "use block" is selected "yes".**

Parameter "Evaluation of the blocking object"

Each logic gate has its own block object (AND logic X: output block), for which it is set here whether it blocks on receipt of a 1 or 0.

Options:

**1=block | 0=release**

**0=block | 1=release**

**Parameter "Blocking object value before 1.communication"**

Before the first communication, i.e. after commissioning or bus voltage restoration, the block can be active (1) or not (0).

Options: **0/1**

**Parameter "With blocking"**

This parameter is used to set the action when locking.

Options:

**Do not send telegram**

**Transmit blocking value**

**Parameter "On release(with 2 seconds release delay)"**

This parameter is used to set the action when release.

Options: [Dependent on the "Switching output sends" setting]

**Monitoring:**

**Parameter "Use input monitoring"**

**Parameter "Input monitoring"**

**Parameter "Monitoring period"**

**Parameter "Output behaviour on exceeding the monitoring time"**

If necessary, activate the input monitoring. Set which inputs are to be monitored, at which intervals the inputs are to be monitored and what value the "monitoring status" should have, if the monitoring period is exceeded without a feedback being given.

Options:**No/Yes**

Options:**1/2/3/4/.../2+3+4/1+2+3+4**

Options:**5sec/10sec/.../1.5h/2h**

Options:**Do not send telegram/Transmit excess value**

# Chapter 5 Description of communication object

The communication object is the medium to communicate other device on the bus, namely only the communication object can communicate with the bus.

**NOTE: "C" in "Flag" column in the below table means enable the communication function of the object; "W" means value of object can be written from the bus; "R" means the value of the object can be read by the other devices; "T" means the object has the transmission function; "U" means the value of the object can be updated.**

## 5.1 Communication object of "General settings"

| | Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | Software version | Output | | | 2 bytes | C | R | - | T | - | DPT version | Low |

Fig.5.1 Communication object of "General settings"

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **1** | **Software version** | **Output** | **2bytes** | **C,R,T** | **1.001 Switch** |
| Read the Software Version using this Object. | | | | | |

Table5.1 Communication object of "General settings"

## 5.2 Communication object of “GPS settings”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 104 | GPS malfunction (0 : OK... | Output | | | 1 bit | C | R | - | T | - | boolean | Low |
| 106 | Date | Input / Output | | | 3 bytes | C | R | W | T | - | date | Low |
| 107 | Time | Input / Output | | | 3 bytes | C | R | W | T | - | time of day | Low |
| 108 | Date and time query | Input | | | 1 bit | C | - | W | - | - | trigger | Low |
| 105 | Date / time | Input / Output | | | 8 bytes | C | R | W | T | - | date time | Low |

Fig.5.2 Communication object of “GPS settings”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **104** | **GPS malfunction (0: OK \| 1: NOK)** | **Output** | **1 Bit** | **R,C,T** | **1.002 boolean** |
| If enabled, gps error is recognised = 1 when no value received after a 20min-2hr time. (0 = No Erorr) Default. | | | | | |
| **105** | **Date / time** | **Output** | **8 Bytes** | **R,W,C,T** | **19.001 date time** |
| Both Date and Time are read or written using this object. | | | | | |
| **106** | **Date** | **Output** | **3 Bytes** | **R,W,C,T** | **11.001 date** |
| The Date can be read or written here. When setting manually, a maximum interval of 10 seconds between setting the Date and Time is allowed. | | | | | |
| **107** | **Time** | **Output** | **3 Bytes** | **R,W,C,T** | **10.001 time of day Day** |
| The Time can be read or written here. When setting manually, a maximum interval of 10 seconds between setting the Date and Time is allowed. | | | | | |
| **108** | **Date and time query** | **Input** | **1 Bit** | **W,C** | **1.017 trigger** |

| |
|---|
| Writing a 1 to the communication object triggers the device to send its current date and time information to the KNX bus. This is often used to synchronize or retrieve the current time from the device. |

Table 5.2 Communication object of “GPS settings”

## 5.3 Communication object of “Location”

| | 序号 | 名称 | 对象功能 | 描述 | 群组地址 | 长度 | C | R | W | T | U | 数据类型 | 优先级 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 110 | Location: Latitude [°] | Output | | | 4 bytes | C | R | - | T | - | angle (degree) | 低 |
| | 111 | Location: Longitude [°] | Output | | | 4 bytes | C | R | - | T | - | angle (degree) | 低 |

Fig.5.3 Communication object of “Location”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **110** | **Location: Latitude [°]** | **Output** | **4 Bytes** | **R,C,T** | **14.007 angle(degree)** |
| The latitude can be read in degrees [°] (Provided from the GPS).Negative = South, positive = North | | | | | |
| **111** | **Location: Longitude [°]** | **Output** | **4 Bytes** | **R,C,T** | **14.007 angle(degree)** |
| The longitude can be read in degrees [°] (Provided from the GPS).Negative = West, positive = East | | | | | |

Table 5.3 Communication object of “Location”

## 5.4 Communication object of “Rain”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 114 | Rain: Switching output | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 115 | Rain: Switching output with fixed delays | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 116 | Rain: Switching delay to rain | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 117 | Rain: Switching delay to no rain | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |

Fig.5.4 Communication object of “Rain”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **114** | **Rain: Switching output** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| This Object sends if Rain recognition on the bus (Rain=1; No Rain=0). After reset, (by settings: by change, cyclically). | | | | | |
| **115** | **Rain: Switching output with fixed delays** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| (Only valid up to the first call) 1 = rain, 0 = no rain. When 1 , the system reacts according to predefined time intervals on how it handles the transition back to dry conditions.(Rain=1; No Rain=0) | | | | | |
| **116** | **Rain: Switch delay to rain** | **Input** | **2 Bytes** | **W,C** | **7.005 time(s)** |
| The delay can be set (in sec) for Rain recognition for one time. | | | | | |
| **117** | **Rain: Switch delay to no rain** | **Input** | **2 Bytes** | **W,C** | **7.005 time(s)** |
| The delay can (in sec) for No Rain recognition for one time | | | | | |

Table5.4 Communication object of “Rain”

## 5.5 Communication object of “Temperature”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 121 | Temperature sensor: Malfunction | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 122 | Temperature sensor: External measurement | Input | | | 2 bytes | C | - | W | T | - | temperature (°C) | Low |
| 123 | Temperature sensor: Internal measurement | Output | | | 2 bytes | C | R | - | T | - | temperature (°C) | Low |
| 124 | Temperature sensor: Total measurement | Output | | | 2 bytes | C | R | - | T | - | temperature (°C) | Low |
| 125 | Temperature sensor: Min./Max. measurement query | Input | | | 1 bit | C | - | W | - | - | trigger | Low |
| 126 | Temperature sensor: Minimum measurement | Output | | | 2 bytes | C | R | - | T | - | temperature (°C) | Low |
| 127 | Temperature sensor: Maximum measurement | Output | | | 2 bytes | C | R | - | T | - | temperature (°C) | Low |
| 128 | Temperature sensor: Min./Max. measurement reset | Input | | | 1 bit | C | - | W | - | - | trigger | Low |
| 129 | Felt temp.: Measured value | Output | | | 2 bytes | C | R | - | T | - | temperature (°C) | Low |

Fig.5.5 Communication object of “Temperature”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **121** | **Temperature sensor: Malfunction** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| If enabled, it indicates if the temperature sensor is experiencing an error (1 = malfunction, 0 = no malfunction) | | | | | |
| **122** | **Temperature sensor: External measured value** | **Input** | **2 Bytes** | **W,C,T** | **9.001 temperature (°C)** |
| when enabled, it measure the value of an external KNX Temp Sensor. If using an External Sensor the values should be sent to this object. | | | | | |
| **123** | **Temperature sensor: Measured value** | **Output** | **2 Bytes** | **R,C,T** | **9.001 temperature (°C)** |
| Measured Value of the internal Sensor. | | | | | |
| **124** | **Temperature sensor: Switching output, total** | **Output** | **2 Bytes** | **R,C,T** | **9.001 temperature (°C)** |
| External measured value proportion of of the total Value (100% = Internal value is disgarded). If you want to mix the temperature use another percentage setting. | | | | | |
| **125** | **Temperature sensor: Min./max. measurement query** | **Input** | **1 Bit** | **W,C** | **1.017 trigger** |

| | | | | | |
|---|---|---|---|---|---|
| Request the maximum and minimum wind value recorded. Writing a 1 to the communication object triggers the temperature sensor to report its minimum and maximum measured values to the KNX bus. | | | | | |
| **126** | **Temperature sensor: Minimum measurement** | **Output** | **2 Bytes** | **R,C,T** | **9.001 temperature (°C)** |
| Minimum Measured Value after Reset the bus send it back after requesting a query. | | | | | |
| **127** | **Temperature sensor: Maximum measurement** | **Output** | **2 Bytes** | **R,C,T** | **9.001 temperature (°C)** |
| Maximum Measured Value after Reset the bus send it back after requesting a query. | | | | | |
| **128** | **Temperature sensor: Min./max. reading reset** | **Input** | **1 Bit** | **W,C** | **1.017 trigger** |
| Min./Max values reset after requesting them using the Measurement query. (Obj. No. 125). | | | | | |
| **129** | **Temp. sensed: Measured value** | **Output** | **2 Bytes** | **R,C,T** | **9.001 temperature (°C)** |
| Felt temperature is according to wind chill and heat index, which account for wind and humidity to indicate how temperature feels to people. | | | | | |

Table 5.5 Communication object of “Temperature”

## 5.6 Communication object of “Temperature threshold value”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 131 | Temp. threshold value 1: Absolute value | Input / Output | | | 2 bytes | C | R | W | T | - | temperature (°C) | Low |
| 133 | Temp. threshold value 1: Switching delay from 0 to 1 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 134 | Temp. threshold value 1: Switching delay from 1 to 0 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 135 | Temp. threshold value 1: Switching output | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 136 | Temp. threshold value 1: Switching output block | Input | | | 1 bit | C | - | W | - | - | switch | Low |
| 132 | Temp. threshold value 1: (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |

Fig.5.6 Communication object of “Temperature threshold value”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **131** | **Temp. threshold value 1: Absolute value** | **Input/Output** | **2 Bytes** | **R,W,C,T** | **9.001 temperature (°C)** |
| Reference point of setting and/or reading the threshold value 1. | | | | | |
| **132** | **Temp. threshold value 1: (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 the Temp threshold value 1. | | | | | |
| **133** | **Temp. threshold value 1: Switching delay from 0 to 1** | **Input** | **2 Bytes** | **W,C** | **7.005 time(s)** |
| Indicating the time period in seconds that should be exceeded before Obj.No. 135 changes from 0 to 1, after (Measured value is over Obj.No. 131). | | | | | |
| **134** | **Temp. threshold value 1: Switching delay from 1 to 0** | **Input** | **2 Bytes** | **W,C** | **7.005 time(s)** |
| Indicating the time period in seconds that should be exceeded before Obj.No. 135 changes from 1 to 0, after (Measured value is under Obj.No. 131). | | | | | |
| **135** | **Temp. threshold value 1: Switching output** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Used to trigger actions if the measured value is above or under (considering the time delays) temperature threshold 1 (The telegram value is defined by the parameter “Output is at (TV=threshold value) (SD=Switching distance)”). | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **136** | **Temp. threshold value 1: Switching output block** | **Input** | **1 Bit** | **W,C** | **1.001 switch** |
| Used to receive a binary state to (block = 1 or allow = 0 "default values") the switching output based on temperature threshold 1. | | | | | |

Table5.6 Communication object of “Temperature threshold value”

### 5.7 Communication object of “Frost alarm”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 161 | Frost alarm | Output | | | 1 bit | C | R | - | T | - | switch | Low |

Fig.5.7 Communication object of “Frost alarm”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **161** | **Frost alarm** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Independet of the façade Frost alarm. Is set HIGH according to External Temperature, Time during or after precipitation. Is set LOW according to External Temperatue, if a duration time is exceeded. Value can be Inverted. | | | | | |

Table5.7 Communication object of “Frost alarm”

## 5.8 Communication object of “Humidity measured value”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 391 | Humidity sensor: malfunction | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 394 | Humidity sensor: external measured value | Input | | | 2 bytes | C | - | W | T | - | humidity (%) | Low |
| 395 | Humidity sensor: internal measured value | Output | | | 2 bytes | C | R | - | T | - | humidity (%) | Low |
| 396 | Humidity sensor: total measured value | Output | | | 2 bytes | C | R | - | T | - | humidity (%) | Low |
| 397 | Humidity sensor: measured value min./max. query | Input | | | 1 bit | C | - | W | - | - | trigger | Low |
| 398 | Humidity sensor: minimum measured value | Output | | | 2 bytes | C | R | - | T | - | humidity (%) | Low |
| 399 | Humidity sensor: maximum measured value | Output | | | 2 bytes | C | R | - | T | - | humidity (%) | Low |
| 400 | Humidity sensor: measured value min./max. reset | Input | | | 1 bit | C | - | W | - | - | trigger | Low |

Fig.5.8 Communication object of “Humidity measured value

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **391** | **Humidity sensor: Malfunction** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| If enabled, it indicates if the humidity sensor is experiencing an error (1 = malfunction, 0 = no malfunction) | | | | | |
| **394** | **Humidity sensor: External measured value** | **Input** | **2 Bytes** | **C,W,T** | **9.007 humidity(%)** |
| When enabled, it reads the value of an external KNX Humidity Sensor. If using an External Sensor the values should be sent to this object. | | | | | |
| **395** | **Humidity sensor: Measured value** | **Output** | **2 Bytes** | **R,C,T** | **9.007 humidity(%)** |
| Measured Value of the internal humidity sensor. | | | | | |
| **396** | **Humidity sensor: Switching output, total** | **Output** | **2 Bytes** | **R,C,T** | **9.007 humidity(%)** |
| External measured value proportion of the total Value (100% = Internal value is disgarded). If you want to mix the humidity use another percentage setting. | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **397** | **Humidity sensor: Min./max. measurement query** | **Input** | **1 Bit** | **W,C** | **1.017 trigger** |
| Request the maximum and minimum value recorded. Writing a 1 to the communication object triggers the humidity sensor to report ist maximum and minimum measured values to the KNX bus. | | | | | |
| **398** | **Humidity sensor: Minimum measurement** | **Output** | **2 Bytes** | **R,C,T** | **9.007 humidity(%)** |
| Minimum Measured Value after Reset the bus send it back after requesting a query. | | | | | |
| **399** | **Humidity sensor: Maximum measurement** | **Output** | **2 Bytes** | **R,C,T** | **9.007 humidity(%)** |
| Maximum Measured Value after Reset the bus send it back after requesting a query. | | | | | |
| **400** | **Humidity sensor: Min./max. reading reset** | **Input** | **1 Bit** | **W,C** | **1.017 trigger** |
| Min./Max values reset after requesting them using the Measurement query. (Obj.No. 397 ). | | | | | |

Table5.8 Communication object of “Humidity measured value

## 5.9 Communication object of “Humidity threshold value”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 411 | Humidity threshold value 1: Absolute value | Input / Output | | | 2 bytes | C | R | W | T | - | humidity (%) | Low |
| 412 | Humidity threshold value 1: (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 413 | Humidity threshold value 1: Delay from 0 to 1 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 414 | Humidity threshold value 1: Delay from 1 to 0 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 415 | Humidity threshold value 1: Switching output | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 416 | Humidity threshold value 1: Switching output block | Input | | | 1 bit | C | - | W | - | - | switch | Low |

Fig.5.9 Communication object of “Humidity threshold value”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **411** | **Humidity threshold value 1: Absolute value** | **Input / Output** | **2 Bytes** | **R,W,C,T** | **9.007 humidity(%)** |
| Reference point of setting and/or reading the Humidity threshold value 1. | | | | | |
| **412** | **Humidity threshold value 1: (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 the Humidity threshold value 1. | | | | | |
| **413** | **Humidity threshold value 1: Delay from 0 to 1** | **Input** | **2 Bytes** | **W,C** | **7.005 time(s)** |
| Indicating the time period in seconds that should be exceeded before Obj.No. 415 changes from 0 to 1, after (Measured value is over Obj.No. 411 ). | | | | | |
| **414** | **Humidity threshold value 1: Delay from 1 to 0** | **Input** | **2 Bytes** | **W,C** | **7.005 time(s)** |
| Indicating the time period in seconds that should be exceeded before Obj.No. 415 changes from 1 to 0, after (Measured value is under Obj.No. 411 ). | | | | | |
| **415** | **Humidity threshold value 1: Switching output** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Used to trigger actions if the measured value is above or under (considering the time delays) humidity threshold 1(The telegram value is defined by the parameter “Output is at (TV=threshold value) | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| (SD=Switching distance)”). | | | | | |
| **416** | **Humidity threshold value**<br>**1: Switching output block** | **Input** | **1 Bit** | **W,C** | **1.001 switch** |
| Used to receive a binary state to (block = 1 or allow = 0 "default values") the switching output based on humidity threshold 1. | | | | | |

Table5.9 Communication object of “Humidity threshold value”

## 5.10 Communication object of “Dew point measured value”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 461 | Dew point: Measurement | Output | | | 2 bytes | C | R | - | T | - | temperature (°C) | Low |
| 462 | Cooling medium temp.: Threshold value | Output | | | 2 bytes | C | R | - | T | - | temperature (°C) | Low |
| 463 | Cooling medium temp.: Actual value | Input | | | 2 bytes | C | R | W | T | - | temperature (°C) | Low |
| 464 | Cooling medium temp.: Offset change (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 465 | Cooling medium temp.: Offset current | Output | | | 2 bytes | C | R | - | T | - | temperature (°C) | Low |
| 466 | Cooling medium temp.: Switching delay from 0 to 1 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 467 | Cooling medium temp.: Switching delay from 1 to 0 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 468 | Cooling medium temp.: Switching output | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 469 | Cooling medium temp.: Switching output block | Input | | | 1 bit | C | - | W | - | - | switch | Low |

Fig.5.10 Communication object of “Dew point measured value”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **461** | **Dewpoint: Measured value** | **Output** | **2 Bytes** | **R,C,T** | **9.001 temperature (°C)** |
| Automatically calculated dewpoint temperature value and sent on the bus. | | | | | |
| **462** | **Coolant temp.: Threshold value** | **Output** | **2 Bytes** | **R,C,T** | **9.001 temperature (°C)** |
| Info to air conditioning system (threshold value = minimum nominal value of coolant temperature). | | | | | |
| **463** | **Coolant temp.: Actual value** | **Input** | **2 Bytes** | **R,W,C, T** | **9.001 temperature (°C)** |
| Surface temperature value measured. | | | | | |
| **464** | **Coolant temp.: Offset change (1:+ \| 0:- )** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 the Offset value. | | | | | |
| **465** | **Coolant temp.: Offset current** | **Output** | **2 Bytes** | **R,C,T** | **9.001 temperature (°C)** |
| Offset value used for altering the threshold value, where the Threshold value=Dew Point+Offset. | | | | | |
| **466** | **Coolant temp.: Switching delay from 0 to 1** | **Input** | **2 Bytes** | **W,C** | **7.005 time(s)** |

| | | | | | |
|---|---|---|---|---|---|
| Indicating the time period in seconds that should be exceeded before Obj.No. 468 changes from 0 to 1, after (Measured value is over Obj.No. 462 ). | | | | | |
| **467** | **Coolant temp.: Switching delay from 1 to 0** | **Input** | **2 Bytes** | **W,C** | **7.005 time(s)** |
| Indicating the time period in seconds that should be exceeded before Obj.No. 468 changes from 1 to 0, after (Measured value is under Obj.No. 462 ). | | | | | |
| **468** | **Coolant temp.: Switching output** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Used to trigger actions if the measured value is above or under (considering the time delays) coolant temp threshold (The telegram value is defined by the parameter “Output is at (TV=threshold value) (SD=Switching distance)”). | | | | | |
| **469** | **Coolant temp.: Switching output block** | **Input** | **Bit** | **W,C1** | **1.001 switch** |
| Used to receive a binary state to (block = 1 or allow = 0 "default values") the switching output based on coolant temp threshold. | | | | | |

Table5.10 Communication object of “Dew point measured value”

## 5.11 Communication object of “Absolute humidity”

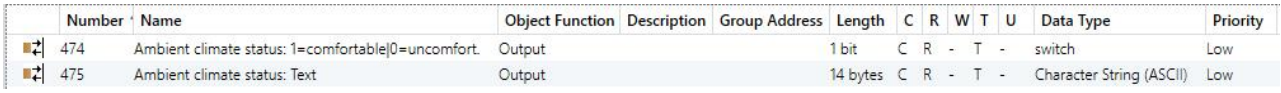
| | Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 471 | Absolute humidity [g/kg] | Output | | | 4 bytes | C | R | - | T | - | amplitude | Low |
| | 472 | Absolute humidity [g/m³] | Output | | | 2 bytes | C | R | - | T | - | 2-byte float value | Low |

Fig.5.11 Communication object of “Absolute humidity”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **471** | **Absolute humidity [g/kg]** | **Output** | **4 Bytes** | **R,C,T** | **14.005 amplitude** |
| Absolute Air Humidity Value detected and sent to the bus [g/kg]. | | | | | |
| **472** | **Absolute humidity [g/m³]** | **Output** | **4 Bytes** | **R,C,T** | **9.*2-byte float value** |
| Absolute Air Humidity Value detected and sent to the bus [g/m³]. | | | | | |

Table5.11 Communication object of “Absolute humidity”

## 5.12 Communication object of “Comfort field”



| | Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 474 | Ambient climate status: 1=comfortable\|0=uncomfort. | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| | 475 | Ambient climate status: Text | Output | | | 14 bytes | C | R | - | T | - | Character String (ASCII) | Low |

Fig.5.12 Communication object of “Comfort field”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **474** | **Ambient climate status: 1 = comfortable \| 0 = uncomfortable** | **Output** | **1 Bit** | **R-CT** | **1.001 switch** |
| The comfort field refers to a predefined range of conditions, specifically temperature and humidity. | | | | | |
| **475** | **Ambient climate status: Text** | **Output** | **14 Bytes** | **R-CT** | **16.000 Character String (ASCII)** |
| Text output for the two comfort fields. | | | | | |

Table5.12 Communication object of “Comfort field”

### 5.13 Communication object of “Brightness”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 175 | Brightness sensor measurement | Output | | | 2 bytes | C | R | - | T | - | lux (Lux) | Low |

Fig.5.13 Communication object of “Brightness”

| No. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **175** | **Brightness sensor measurement** | **Output** | **R,C,T** | **2 Bytes** | **9.004 lux (Lux)** |
| Send the highest currently measured value of the five internal Bright. sensors on the bus. | | | | | |

Table 5.13 Communication object of “Brightness”

## 5.14 Communication object of “Brightness threshold values”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 181 | Brightness sensor TLV 1: Absolute value | Input / Output | | | 2 bytes | C | R | W | T | - | lux (Lux) | Low |
| 182 | Brightness sensor TLV 1: (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 183 | Brightness sensor TLV 1: Delay from 0 to 1 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 184 | Brightness sensor TLV 1: Delay from 1 to 0 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 185 | Brightness sensor TLV 1: Switching output | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 186 | Brightness sensor TLV 1: Switching output block | Input | | | 1 bit | C | - | W | - | - | switch | Low |

Fig.5.14 Communication object of “Brightness threshold values”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **181** | **Bright. threshold value 1: Absolute value** | **Input/Output** | **R,W,C,T** | **2 Bytes** | **9.004 lux (Lux)** |
| Reference point of setting and/or reading the bright. threshold value 1. | | | | | |
| **182** | **Bright. threshold value 1: (1:+ \| 0:-)** | **Input** | **W,C** | **1 Bit** | **1.007 step** |
| Used to increment=1 or decrement=0 the bright. threshold value 1. | | | | | |
| **183** | **Bright. threshold value 1: Delay from 0 to 1** | **Input** | **W,C** | **2 Bytes** | **7.005 time(s)** |
| Indicating the time period in seconds that should be exceeded before Obj.No. 185 changes from 0 to 1, after (Measured value is over Obj.No. 181 ). | | | | | |
| **184** | **Bright. threshold value 1: Delay from 1 to 0** | **Input** | **W,C** | **2 Bytes** | **7.005 time(s)** |
| Indicating the time period in seconds that should be exceeded before Obj.No. 185 changes from 1 to 0, after (Measured value is under Obj.No. 181 ). | | | | | |
| **185** | **Bright. threshold value 1: Switching output** | **Output** | **R,C,T** | **1 Bit** | **1.001 switch** |
| Used to trigger actions if the measured value is above or under (considering the time delays) threshold 1(The telegram value is defined by the parameter “Output is at (TV=threshold value) (SD=Switching distance)”). | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **186** | **Bright. threshold value 1: Switching output block** | **Input** | **W,C** | **1 Bit** | **1.001 switch** |
| Used to receive a binary state to (block = 1 or allow = 0 "default values") the switching output based on brightness threshold 1. | | | | | |

Table5.14 Communication object of “Brightness threshold values”

## 5.15 Communication object of “Brightness, TV twilight sensor”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 293 | Twilight brightness TLV 1: Absolute value | Input / Output | | | 2 bytes | C | R | W | T | - | lux (Lux) | Low |
| 294 | Twilight brightness threshold value 1: (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 295 | Twilight brightness threshold 1: delay from 0 to 1 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 296 | Twilight brightness threshold 1: delay from 1 to 0 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 297 | Twilight brightness TLV 1: Switching output | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 298 | Twilight brightness TLV 1: Switching output block | Input | | | 1 bit | C | - | W | - | - | switch | Low |

Fig.5.15 Communication object of “Brightness, TV twilight sensor”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **293** | **Twilight brightness threshold value 1: Absolute value** | **Input/Output** | **R,W,C,T** | **2 Bytes** | **9.004 lux (Lux)** |
| Reference point of setting and/or reading Twilight threshold value 1. | | | | | |
| **294** | **Twilight brightness threshold 1: (1:+ \| 0:-)** | **Input** | **W,C** | **1 Bit** | **1.007 step** |
| Used to increment=1 or decrement=0 the Twilight threshold value 1. | | | | | |
| **295** | **Twilight brightness threshold 1: delay from 0 to 1** | **Input** | **W,C** | **2 Bytes** | **7.005 time(s)** |
| Indicating the time period in seconds that should be exceeded before Obj.No. 297. | | | | | |
| **296** | **Twilight brightness threshold 1: delay from 1 to 0** | **Input** | **W,C** | **2 Bytes** | **7.005 time(s)** |
| Indicating the time period in seconds that should be exceeded before Obj.No. 297 changes from 1 to 0, after (Measured value is under Obj.No. 293 ). | | | | | |
| **297** | **Twilight brightness threshold value 1: Switching output** | **Output** | **R,C,T** | **1 Bit** | **1.001 switch** |
| Used to trigger actions if the measured value is above or under (considering the time delays) threshold 1(The telegram value is defined by the parameter “Output is at (TV=threshold value) (SD=Switching distance)”). | | | | | |
| **298** | **Twilight brightness threshold** | **Input** | **W,C** | **1 Bit** | **1.001 switch** |

| | | | | | |
|---|---|---|---|---|---|
| | **value 1: Switching output block** | | | | |
| Used to receive a binary state to (block = 1 or allow = 0 "default values") the switching output based on twilight threshold 1. | | | | | |

Table5.15 Communication object of “Brightness, TV twilight sensor”

## 5.16 Communication object of “Night”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 331 | Night: Switching output | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 332 | Night: Switching delay to night | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 333 | Night: Switching delay on day | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |

Fig.5.16 Communication object of “Night”

| No. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **331** | **Night: Switching output** | **Output** | **R,C,T** | **1 Bit** | **1.001 switch** |
| Used to detect Night when illumination is less than or equal a set value in Lux . | | | | | |
| **332** | **Night: Switching delay on night** | **Input** | **W,C** | **2 Bytes** | **7.005 time(s)** |
| Delay time in sec for output Obj.No. 332 when brightness value is Less than or equal Obj.No. 331 . | | | | | |
| **333** | **Night: Switching delay on day** | **Input** | **W,C** | **2 Bytes** | **7.005 time(s)** |
| Delay time in sec for output Obj.No. 332 when brightness value is higher than Obj.No. 331. | | | | | |

Table 5.16 Communication object of “Night”

## 5.17 Communication object of “Sun position”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 341 | Sun position: Direction of the sun | Input | | | 4 bytes | C | - | W | T | - | angle (degree) | Low |
| 342 | Sun position: Height of the sun | Input | | | 4 bytes | C | - | W | T | - | angle (degree) | Low |

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 343 | Sun position: Direction of the sun | Input | | | 2 bytes | C | - | W | T | - | 2-byte float value | Low |
| 344 | Sun position: Height of the sun | Input | | | 2 bytes | C | - | W | T | - | 2-byte float value | Low |

Fig.5.17 Communication object of “Sun position”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **341** | **Sun position: Azimuth** | **Output** | **R-CT** | **4 Bytes** | **14.007 angle (degree)** |
| Received Value of Sun Azimuth Angle in Degrees (4 bytes floating point). | | | | | |
| **342** | **Sun position: Elevation** | **Output** | **R-CT** | **4 Bytes** | **14.007 angle (degree)** |
| Received Value of Sun Elevation Angle in Degrees (4 bytes floating point). | | | | | |
| **343** | **Sun position: Azimuth** | **Output** | **R-CT** | **2 Bytes** | **9.*2-byte float value** |
| Received Value of Sun Azimuth Angle in Degrees (2 bytes floating point). | | | | | |
| **344** | **Sun position: Elevation** | **Output** | **R-CT** | **2 Bytes** | **9.*2-byte float value** |
| Received Value of Sun Elevation Angle in Degrees (2 bytes floating point). | | | | | |

Table5.17 Communication object of “Sun position”

## 5.18 Communication object of “Wind measurement”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 351 | Wind sensor: Malfunction | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 352 | Wind sensor: Measurement [m/s] | Output | | | 2 bytes | C | R | - | T | - | speed (m/s) | Low |
| 353 | Wind sensor: Measurement [Beaufort] | Output | | | 1 byte | C | R | - | T | - | wind force scale (0..12) | Low |
| 354 | Wind sensor: Max. query measurement | Input | | | 1 bit | C | - | W | - | - | 1-bit, trigger | Low |
| 355 | Wind sensor: Maximum measurement [m/s] | Output | | | 2 bytes | C | R | - | T | - | speed (m/s) | Low |
| 356 | Wind sensor: Maximum measurement [Beaufort] | Output | | | 1 byte | C | R | - | T | - | wind force scale (0..12) | Low |
| 357 | Wind sensor: Max. reset measurement | Input | | | 1 bit | C | - | W | - | - | trigger | Low |

Fig.5.18 Communication object of “Wind measurement”

| No. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **351** | **Wind sensor: Malfunction** | **Output** | **R,C,T** | **1 Bit** | **1.001 switch** |
| If enabled, it indicates if the wind sensor is experiencing an error (1 = malfunction, 0 = no malfunction) | | | | | |
| **352** | **Wind sensor: Measurement [m/s]** | **Output** | **R,C,T** | **2 Bytes** | **9.005 speed (m/s)** |
| Measured value of wind speed in m/s. | | | | | |
| **353** | **Wind sensor: Measurement [Beaufort]** | **Output** | **R,C,T** | **1 Byte** | **20.014 wind force scale (0...12)** |
| Wind speed data in (m/s) in which is converted into the Beaufort scale rating (From 0 --> 12 ). | | | | | |
| **354** | **Wind sensor: Measurement, max. query** | **Input** | **W,C** | **1 Bit** | **1.017 trigger** |
| Request the maximum wind value recorded. Writing a 1 to the communication object triggers the wind sensor to report ist maximum measured value to the KNX bus. | | | | | |
| **355** | **Wind sensor: Maximum measurement [m/s]** | **Output** | **R,C,T** | **2 Bytes** | **9.005 speed (m/s)** |
| Max wind speed measured in m/s. | | | | | |
| **356** | **Wind sensor: Maximum** | **Output** | **R,C,T** | **1 Byte** | **20.014 wind force scale** |

| | | | | | |
|---|---|---|---|---|---|
| | **measurement [Beaufort]** | | | | **(0...12)** |
| Max wind speed measured in Beaufort. | | | | | |
| **357** | **Wind sensor: Measured value max. reset** | **Input** | **W,C** | **1 Bit** | **1.017 trigger** |
| Reset Max wind value recorded. | | | | | |

Table5.18 Communication object of “Wind measure”

## 5.19 Communication object of “Wind threshold values”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 361 | Wind threshold value 1: Absolute value | Input / Output | | | 2 bytes | C | R | W | T | - | speed (m/s), wind speed (km/h) | Low |
| 362 | Wind threshold value 1: (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 363 | Wind threshold value 1: Delay from 0 to 1 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 364 | Wind threshold value 1: Delay from 1 to 0 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 365 | Wind threshold value 1: Switching output | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 366 | Wind threshold value 1: Switching output block | Input | | | 1 bit | C | - | W | - | - | switch | Low |

Fig.5.19 Communication object of “Wind threshold values”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **361** | **Wind threshold value 1: Absolute value** | **Input/Output** | **RWCT** | **2 Bytes** | **9.005 speed (m/s) 9.008 speed (km/h)** |
| Reference point of setting and/or reading the wind threshold value 1. | | | | | |
| **362** | **Wind threshold value 1: (1:+ \| 0:-)** | **Input** | **WC** | **1 Bit** | **1.007 step** |
| Used to increment=1 or decrement=0 the wind threshold value 1. | | | | | |
| **363** | **Wind threshold value 1: Delay from 0 to 1** | **Input** | **WC** | **2 Bytes** | **7.005 time(s)** |
| Indicating the time period in seconds that should be exceeded before Obj.No. 365 changes from 0 to 1, after (Measured value is over Obj.No. 361 ). | | | | | |
| **364** | **Wind threshold value 1: Delay from 1 to 0** | **Input** | **WC** | **2 Bytes** | **7.005 time(s)** |
| Indicating the time period in seconds that should be exceeded before Obj.No. 365 changes from 1 to 0, after (Measured value is under Obj.No. 361 ). | | | | | |
| **365** | **Wind threshold value 1: Switching output** | **Output** | **R-CT** | **1 Bit** | **1.001 switch** |
| Used to trigger actions if the measured value is above or under (considering the time delays) wind threshold 1(The telegram value is defined by the parameter “Output is at (TV=threshold value) (SD=Switching distance)”). | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **366** | **Wind threshold value 1: Switching output block** | **Input** | **WC** | **1 Bit** | **1.001 switch** |
| Used to receive a binary state to (block = 1 or allow = 0 "default values") the switching output based on wind threshold 1. | | | | | |

Table5.19 Communication object of “Wind threshold values”

## 5.20 Communication object of “Wind direction”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1890 | Wind direction: Measured value [cardinal point] | Output | | | 14 bytes | C | R | - | T | - | Character String (ASCII) | Low |
| 1891 | Wind direction measured value [°] | Output | | | 1 byte | C | R | - | T | - | angle (degrees) | Low |
| 1892 | Wind direction North | Output | | | 1 bit | C | R | - | T | - | boolean | Low |
| 1893 | Wind direction North-East | Output | | | 1 bit | C | R | - | T | - | boolean | Low |
| 1894 | Wind direction East | Output | | | 1 bit | C | R | - | T | - | boolean | Low |
| 1895 | Wind direction South-East | Output | | | 1 bit | C | R | - | T | - | boolean | Low |
| 1896 | Wind direction South | Output | | | 1 bit | C | R | - | T | - | boolean | Low |
| 1897 | Wind direction South-West | Output | | | 1 bit | C | R | - | T | - | boolean | Low |
| 1898 | Wind direction West | Output | | | 1 bit | C | R | - | T | - | boolean | Low |
| 1899 | Wind direction North-West | Output | | | 1 bit | C | R | - | T | - | boolean | Low |

Fig.5.20 Communication object of “Wind direction”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **1890** | **Wind direction: Measurement [compass direction]** | **Output** | **14 Bytes** | **R,C,T** | **16.000 Character String (ASCII)** |
| Wind direction sent as text (9 cases). | | | | | |
| **1891** | **Wind direction measurement [°]** | **Output** | **1 Byte** | **R,C,T** | **5.003 angle (degrees)** |
| Wind direction measured value sent on the bus in Degrees (1 byte object). | | | | | |
| **1892** | **Wind direction north** | **Output** | **1 Bit** | **R,C,T** | **1.002 boolean** |
| If the wind direction is "North", The Output is 0/1.(The telegram value is defined by the parameter “North(0°) if active, send:”) | | | | | |
| **1893** | **Wind direction North-East** | **Output** | **1 Bit** | **R,C,T** | **1.002 boolean** |
| If the wind direction is "North-East", The Output is 0/1.(The telegram value is defined by the parameter “North-East(45°) if active, send:”) | | | | | |
| **1894** | **Wind direction east** | **Output** | **1 Bit** | **R,C,T** | **1.002 boolean** |
| If the wind direction is "East", The Output is 0/1.(The telegram value is defined by the parameter “East(90°) if active, send:”) | | | | | |
| **1895** | **Wind direction South-East** | **Output** | **1 Bit** | **R,C,T** | **1.002 boolean** |

| | | | | | |
|---|---|---|---|---|---|
| If the wind direction is "South-East", The Output is 0/1.(The telegram value is defined by the parameter “South East(135°) if active, send:”) | | | | | |
| **1896** | **Wind direction south** | **Output** | **1 Bit** | **R,C,T** | **1.002 boolean** |
| If the wind direction is "South", The Output is 0/1.(The telegram value is defined by the parameter “South(180°) if active, send:”) | | | | | |
| **1897** | **Wind direction South-West** | **Output** | **1 Bit** | **R,C,T** | **1.002 boolean** |
| If the wind direction is "South-West", The Output is 0/1.(The telegram value is defined by the parameter “South-West(225°) if active, send:”) | | | | | |
| **1898** | **Wind direction west** | **Output** | **1 Bit** | **R,C,T** | **1.002 boolean** |
| If the wind direction is "West", The Output is 0/1.(The telegram value is defined by the parameter “West(270°) if active, send:”) | | | | | |
| **1899** | **Wind direction North-West** | **Output** | **1 Bit** | **R,C,T** | **1.002 boolean** |
| If the wind direction is "North-West", The Output is 0/1.(The telegram value is defined by the parameter “North-West(315°) if active, send:”) | | | | | |

Table5.20 Communication object of “Wind direction”

## 5.21 Communication object of “Wind direction ranges”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1904 | Wind direction: Range 1 Switching output | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 1905 | Wind direction range value 1: Delay from 0 to 1 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 1906 | Wind direction range value 1: Delay from 1 to 0 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 1907 | Wind direction range value 1 from: (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 1908 | Wind direction range value 1 up to: (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 1909 | Wind direction range value 1 from: Absolute value | Input / Output | | | 4 bytes | C | R | W | T | - | angle (degree) | Low |
| 1910 | Wind direction range value 1 up to: Absolute value | Input / Output | | | 4 bytes | C | R | W | T | - | angle (degree) | Low |
| 1911 | Wind direction range value 1: Switching output block | Input | | | 1 bit | C | - | W | - | - | switch | Low |

Fig.5.21 Communication object of “Wind direction ranges”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **1904** | **Wind direction: Range 1 Switching output** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Used to trigger actions if the measured value is in the set range (considering the time delays). Wind direction range ß.(The telegram value is defined by the parameter “Output is at(TV=threshold value)(SD= Switching distance)”) | | | | | |
| **1905** | **Wind direction range value 1: Delay from 0 to 1** | **Input** | **2 Bytes** | **W,C** | **7.005 time (s)** |
| Time period that should be exceeded before Obj.No. 1904 changes from 0 to 1. | | | | | |
| **1906** | **Wind direction range value 1: Delay from 1 to 0** | **Input** | **2 Bytes** | **W,C** | **7.005 time (s)** |
| Time period that should be exceeded before Obj.No. 1904 changes from 1 to 0. | | | | | |
| **1907** | **Wind direction range value 1 from: (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 the Wind direction range ß "From" value 1, 1bit value. | | | | | |
| **1908** | **Wind direction range value 1 up to: (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 the Wind direction range "Up to" value 1, 1bit value. | | | | | |
| **1909** | **Wind direction range value** | **Input / Output** | **4 Bytes** | **R,W,C,T** | **14.007 angle (degree)** |

| | | | | | |
|---|---|---|---|---|---|
| | **1 from: Absolute value** | | | | |
| Reference point of setting and/or reading the Wind direction range ß "From" value 1 (degrees °). | | | | | |
| **1910** | **Wind direction range value 1 up to: Absolute value** | **Input / Output** | **4 Bytes** | **R,W,C,T** | **14.007 angle (degree)** |
| Reference point of setting and/or reading the Wind direction range ß "Up to" value 1 (degrees °). | | | | | |
| **1911** | **Wind direction range value 1: Switching output block** | **Input** | | **W,C** | **1.001 switch** |
| Used to receive a binary state block = 1 or allow = 0 the switching of an output (Obj.No. 1904) based on Wind direction range ß. | | | | | |

Table5.21 Communication object of “Wind direction ranges”

## 5.22 Communication object of “Pressure measured value”

| | Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 481 | Air pressure sensor: Malfunction | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| | 482 | Air pressure sensor: Normal measurement [Pa] | Output | | | 4 bytes | C | R | - | T | - | pressure (Pa) | Low |
| | 483 | Air pressure sensor: Barometric measurement [Pa] | Output | | | 4 bytes | C | R | - | T | - | pressure (Pa) | Low |
| | 484 | Air pressure sensor: Min./Max. measurement query | Input | | | 1 bit | C | - | W | - | - | trigger | Low |
| | 485 | Air pressure sensor: Min. normal measurement [Pa] | Output | | | 4 bytes | C | R | - | T | - | pressure (Pa) | Low |
| | 486 | Air pressure sensor: Min. bar. measurement [Pa] | Output | | | 4 bytes | C | R | - | T | - | pressure (Pa) | Low |
| | 487 | Air pressure sensor: Max. normal measurement [Pa] | Output | | | 4 bytes | C | R | - | T | - | pressure (Pa) | Low |
| | 488 | Air pressure sensor: Max. bar. measurement [Pa] | Output | | | 4 bytes | C | R | - | T | - | pressure (Pa) | Low |
| | 489 | Air pressure sensor: Min./Max. measurement reset | Input | | | 1 bit | C | - | W | - | - | trigger | Low |
| | 490 | Air pressure sensor: Pressure range text | Output | | | 14 bytes | C | R | - | T | - | Character String (ASCII) | Low |

Fig.5.22 Communication object of “Pressure measured value”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **481** | **Air pressure sensor: Malfunction** | **Output** | **1 Bit** | **C,R,T** | **1001 switch** |
| If enabled, it indicates if the Air pressure sensor is experiencing a malfunction(1 = malfunction, 0 = no malfunction). | | | | | |
| **482** | **Air pressure sensor: Normal measurement [Pa]** | **Output** | **4 Bytes** | **C,R,T** | **14.058 pressure (Pa)** |
| The air pressure is the pressure measured directly by the sensor (without compensation). | | | | | |
| **483** | **Air pressure sensor: Barometric measurement [Pa]** | **Output** | **4 Bytes** | **C,R,T** | **14.058 pressure (Pa)** |
| Sends the Barometric pressure compensated by altitude on the bus. | | | | | |
| **484** | **Air pressure sensor: Min./max. measurement query** | **Input** | **1 Bit** | **C,W** | **1.017 trigger** |
| Request the maximum and minimum Air pressure value recorded. Writing a 1 to the communication object triggers the Air pressure sensor to report its minimum and maximum measured values to the KNX bus. | | | | | |
| **485** | **Air pressure sensor: Min. normal measurement [Pa]** | **Output** | **4 Bytes** | **C,R,T** | **14.058 pressure (Pa)** |

| | | | | | |
|---|---|---|---|---|---|
| Minimum Normal Measured Value after Reset the bus send it back after requesting a query. | | | | | |
| **486** | **Air pressure sensor: Min. barometric measurement [Pa]** | **Output** | **4 Bytes** | **C,R,T** | **14.058 pressure (Pa)** |
| Minimum Barometric Measured Value after Reset the bus send it back after requesting a query. | | | | | |
| **487** | **Air pressure sensor: Max. normal measurement [Pa]** | **Output** | **4 Bytes** | **C,R,T** | **14.058 pressure (Pa)** |
| Maximum Normal Measured Value after Reset the bus send it back after requesting a query. | | | | | |
| **488** | **Air pressure sensor: Max. barometric measurement [Pa]** | **Output** | **4 Bytes** | **C,R,T** | **14.058 pressure (Pa)** |
| Maximum Barometric Value after Reset the bus send it back after requesting a query. | | | | | |
| **489** | **Air pressure sensor:Min./max. reading reset** | **Input** | **1 Bit** | **C,W** | **1.017 trigger** |
| Min./Max values reset after requesting them using the Measurement query (Obj.No. 484 ). | | | | | |
| **490** | **Air pressure sensor: Pressure range text** | **Output** | **14 Bytes** | **C,R,T** | **16.000 character string (ASCII)** |
| Text output regarding Five Air pressure conditions. | | | | | |

Table5.22 Communication object of “Pressure measured value”

## 5.23 Communication object of “Pressure threshold value”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 491 | Air pressure threshold value 1: Absolute value | Input / Output | | | 4 bytes | C | R | W | T | - | pressure (Pa) | Low |
| 492 | Air pressure threshold value 1: (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 493 | Air pressure threshold value 1: Delay from 0 to 1 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 494 | Air pressure threshold value 1: Delay from 1 to 0 | Input | | | 2 bytes | C | - | W | - | - | time (s) | Low |
| 495 | Air pressure threshold value 1: Switching output | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 496 | Air pressure TLV 1: Switching output block | Input | | | 1 bit | C | - | W | - | - | switch | Low |

Fig.5.23 Communication object of “Pressure threshold value”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **491** | **Air pressure threshold value 1: Absolute value** | **Input /Output** | **4 Bytes** | **R,W,C,T** | **14.058 pressure (Pa) Pressure** |
| Reference point of setting and/or reading the Air pressure threshold value 1. | | | | | |
| **492** | **Air pressure threshold value 1: (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 the Air pressure threshold value 1. | | | | | |
| **493** | **Air pressure threshold value 1: Delay from 0 to 1** | **Input** | **2 Bytes** | **W,C** | **7.005 time(s)** |
| Indicating the time period in seconds that should be exceeded before Obj.No. 495 changes from 0 to 1, after (Measured value is over Obj.No. 491 ). | | | | | |
| **494** | **Air pressure threshold value 1: Delay from 1 to 0** | **Input** | **2 Bytes** | **W,C** | **7.005 time(s)** |
| Indicating the time period in seconds that should be exceeded before Obj.No. 495 changes from 1 to 0 after (Measured value is under Obj.No. 491 ). | | | | | |
| **495** | **Air pressure threshold value 1: Switching output** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Used to trigger actions if the measured value is above or under (considering the time delays) Air Pressure threshold 1(The telegram value is defined by the parameter “Output is at(TV=threshold value) (SD=Switching distance)”). | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **496** | **Air pressure threshold value 1: Switching output block** | **Input** | **1 Bit** | **W,C** | **1.001 switch** |
| Used to receive a binary state to (block = 1 or allow = 0 "default values") the switching output based on Air Pressure threshold 1. | | | | | |

Table5.23 Communication object of “Pressure threshold value”

## 5.24 Communication object of “Summer compensation”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 595 | Summer compensation: Outdoor temperature | Input | | | 2 bytes | C | - | W | T | - | temperature (°C) | Low |
| 596 | Summer compensation: Target value | Output | | | 2 bytes | C | R | - | T | - | temperature (°C) | Low |
| 597 | Summer compensation: Block (1 = Blocking) | Input | | | 1 bit | C | - | W | - | - | switch | Low |

Fig.5.24 Communication object of “Summer compensation”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **595** | **Summer compensation: Outdoor temperature** | **Input** | **2 Bytes** | **C,W,T** | **9.001 temperature (°C)** |
| Send the Outdoor temp to this Group adress. | | | | | |
| **596** | **Summer compensation: Setpoint** | **Output** | **2 Bytes** | **R-CT** | **9.001 temperature (°C)** |
| Target indoor temperature which is automatically adjusted based on outdoor temperature Value. | | | | | |
| **597** | **Summer compensation: Block (1 = Block)** | **Input** | **1 Bit** | **WC** | **1.001 switch** |
| Used to receive a binary state to (block = 1 or allow = 0 "default values") the setpoint Obj.No. 597. | | | | | |

Table5.24 Communication object of “Summer compensation”

## 5.25 Communication object of “Facades”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 609 | Façade Wind measurement 1 in m/s | Input | | | 2 bytes | C | - | W | T | - | speed (m/s) | Low |
| 610 | Façade Wind measurement 2 in m/s | Input | | | 2 bytes | C | - | W | T | - | speed (m/s) | Low |
| 611 | Façade Wind measurement 3 in m/s | Input | | | 2 bytes | C | - | W | T | - | speed (m/s) | Low |
| 612 | Façade Wind measurement 4 in m/s | Input | | | 2 bytes | C | - | W | T | - | speed (m/s) | Low |
| 613 | Façade Wind measurement 5 in m/s | Input | | | 2 bytes | C | - | W | T | - | speed (m/s) | Low |
| 614 | Façade Wind measurement 6 in m/s | Input | | | 2 bytes | C | - | W | T | - | speed (m/s) | Low |
| 615 | Façade Wind measurement 7 in m/s | Input | | | 2 bytes | C | - | W | T | - | speed (m/s) | Low |
| 616 | Façade Wind measurement 8 in m/s | Input | | | 2 bytes | C | - | W | T | - | speed (m/s) | Low |
| 617 | Façade Wind measured value 9 in m/s | Input | | | 2 bytes | C | - | W | T | - | speed (m/s) | Low |
| 618 | Façade Wind measured value 10 in m/s | Input | | | 2 bytes | C | - | W | T | - | speed (m/s) | Low |
| 619 | Façade Wind measured value 11 in m/s | Input | | | 2 bytes | C | - | W | T | - | speed (m/s) | Low |
| 620 | Façade Wind measured value 12 in m/s | Input | | | 2 bytes | C | - | W | T | - | speed (m/s) | Low |
| 621 | Façade Wind automation blocking duration in min. | Input/Output | | | 2 bytes | C | R | W | T | - | time (min) | Low |
| 622 | Façade Wind autom. block. dur. in min. (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 623 | Façade Rain automation Delay in minutes | Input/Output | | | 2 bytes | C | R | W | T | - | time (min) | Low |
| 624 | Façade Rain automation Delay in mins (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 625 | Façade Twilight Threshold value in lux | Input/Output | | | 2 bytes | C | R | W | T | - | lux (Lux) | Low |
| 626 | Façade Twilight threshold value in Lux (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 627 | Façade Outdoor temperature (°C) | Input | | | 2 bytes | C | - | W | T | - | temperature (°C) | Low |
| 628 | Façade Heat protection threshold value in °C | Input/Output | | | 2 bytes | C | R | W | T | - | temperature (°C) | Low |
| 629 | Façade Frost alarm TLV in °C (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 630 | Façade Frost alarm start temperature in °C | Input/Output | | | 2 bytes | C | R | W | T | - | temperature (°C) | Low |
| 631 | Façade Frost alarm start temp. in °C (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 632 | Façade Frost alarm start delay in hours | Input/Output | | | 2 bytes | C | R | W | T | - | time (h) | Low |
| 633 | Façade Frost alarm start temp. in hrs (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 634 | Façade Frost alarm stop temperature in °C | Input/Output | | | 2 bytes | C | R | W | T | - | temperature (°C) | Low |
| 635 | Façade Frost alarm stop temp. in °C (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 636 | Façade Frost alarm stop delay in hours | Input/Output | | | 2 bytes | C | R | W | T | - | time (h) | Low |
| 637 | Façade Frost alarm stop delay in hours (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 638 | Façade Pyranometer measured value 1 in W/m² | Input | | | 2 bytes | C | - | W | T | - | power density (W/m²) | Low |
| 639 | Façade Pyranometer measured value 1 in W/m² | Input | | | 4 bytes | C | - | W | T | - | amplitude | Low |
| 640 | Façade Pyranometer measured value 2 in W/m² | Input | | | 2 bytes | C | - | W | T | - | power density (W/m²) | Low |
| 641 | Façade Pyranometer measured value 2 in W/m² | Input | | | 4 bytes | C | - | W | T | - | amplitude | Low |
| 642 | Façade Pyranometer measured value 3 in W/m² | Input | | | 2 bytes | C | - | W | T | - | power density (W/m²) | Low |
| 643 | Façade Pyranometer measured value 3 in W/m² | Input | | | 4 bytes | C | - | W | T | - | amplitude | Low |
| 644 | Façade Pyranometer measured value 4 in W/m² | Input | | | 2 bytes | C | - | W | T | - | power density (W/m²) | Low |
| 645 | Façade Pyranometer measured value 4 in W/m² | Input | | | 4 bytes | C | - | W | T | - | amplitude | Low |
| 648 | Façade X channel status output (1: activate) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 649 | Façade X channel name | Output | | | 14 bytes | C | R | - | T | - | Character String (ASCII) | Low |
| 650 | Façade X channel (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | switch | Low |
| 651 | Façade X channel state text | Output | | | 14 bytes | C | R | - | T | - | Character String (ASCII) | Low |
| 652 | Façade X channel status bit text | Output | | | 14 bytes | C | R | - | T | - | Character String (ASCII) | Low |
| 653 | Façade X channel status bit state | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 654 | Façade X channel delay | Output | | | 2 bytes | C | R | - | T | - | time (s) | Low |
| 655 | Façade X channel status bit selection (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 656 | Façade Wind simulation in m/s | Input | | | 2 bytes | C | R | W | - | - | speed (m/s) | Low |
| 657 | Façade Wind ext. blocking simulation (1: active) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 658 | Façade Wind alarm simulation (1: active) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 659 | Façade Rain simulation (1: active) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 660 | Façade Outdoor temperature in °C simulation | Input | | | 2 bytes | C | R | W | - | - | temperature (°C) | Low |
| 661 | Façade Indoor temperature in °C simulation | Input | | | 2 bytes | C | R | W | - | - | temperature (°C) | Low |
| 662 | Façade Brightness in Lux simulation | Input | | | 2 bytes | C | R | W | - | - | lux (Lux) | Low |
| 663 | Façade Sun intensity simulation in watts/m² | Input | | | 2 bytes | C | R | W | - | - | power density (W/m²) | Low |
| 664 | Façade Date simulation | Input | | | 3 bytes | C | R | W | - | - | date | Low |
| 665 | Façade Time simulation | Input | | | 3 bytes | C | R | W | - | - | time of day | Low |
| 666 | Façade Direction of the sun simulation in °, date & ti... | Output | | | 4 bytes | C | R | - | T | - | angle (degree) | Low |
| 667 | Façade Height of the sun simulation in °, date & time | Output | | | 4 bytes | C | R | - | T | - | angle (degree) | Low |
| 668 | Façade Direction of the sun simulation in ° | Input | | | 4 bytes | C | R | W | - | - | angle (degree) | Low |
| 669 | Façade Height of the sun simulation in ° | Input | | | 4 bytes | C | R | W | - | - | angle (degree) | Low |
| 670 | Façade Reset simulation (1: reset) | Input | | | 1 bit | C | - | W | - | - | switch | Low |
| 671 | Façade Sun angle mode simulation (1: On \| 0: Off) | Input | | | 1 bit | C | R | W | - | - | switch | Low |

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 672 | Façade 1 simulation (1: On \| 0: Off) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 673 | Façade 1 block (1 = Block \| 0 = Release) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 674 | Façade 1 safety (1: On \| 0: Off) | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 675 | Façade 1 wind extension block (1: On \| 0: Off) | Input | | | 1 bit | C | - | W | - | - | switch | Low |
| 676 | Façade 1 wind extension block TLV in m/s | Input | | | 2 bytes | C | R | W | T | - | speed (m/s) | Low |
| 677 | Façade 1 wind extension block TLV (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 678 | Façade 1 wind ext. block status (1: On \| 0: Off) | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 679 | Façade 1 wind alarm (1: On \| 0: Off) | Input | | | 1 bit | C | - | W | - | - | switch | Low |
| 680 | Façade 1 wind alarm threshold value in m/s | Input | | | 2 bytes | C | R | W | T | - | speed (m/s) | Low |
| 681 | Façade 1 wind alarm threshold value (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 682 | Façade 1 wind alarm status (1: On \| 0: Off) | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 683 | Façade 1 frost alarm status (1: On \| 0: Off) | Output | | | 1 bit | C | R | W | T | - | switch | Low |
| 684 | Façade 1 rain automation (1: activated) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 685 | Façade 1 rain alarm status (1: On \| 0: Off) | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 686 | Façade 1 timed opening (1: act. \| 0: deact.) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 687 | Façade 1 timed opening status (1: On \| 0: Off) | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 688 | Façade 1 outdoor temp. Blocking (1: activated) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 689 | Façade 1 outdoor temperature Block in °C | Input/Output | | | 2 bytes | C | R | W | T | - | temperature (°C) | Low |
| 690 | Façade 1 outdoor temp. Block in °C (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 691 | Façade 1 ext. temp. Block status (1: On \| 0: Off) | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 692 | Façade 1 timed closure (1: activate) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 693 | Façade 1 timed closure status (1: On \| 0: Off) | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 694 | Façade 1 night closure (1: activated) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 695 | Façade 1 night closure status (1: On \| 0: Off) | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 696 | Façade 1 heating protection (1: activated) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 697 | Façade 1 heating prot. status (1: On \| 0: Off) | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 698 | Façade 1 pyranometer (1: activated) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 699 | Façade 1 pyranometer in W/m² | Input/Output | | | 2 bytes | C | R | W | T | - | power density (W/m²) | Low |
| 700 | Façade 1 pyranometer in W/m² (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 701 | Façade 1 pyranometer status (1: On \| 0: Off) | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 702 | Façade 1 indoor temperature in °C | Input | | | 2 bytes | C | - | W | T | - | temperature (°C) | Low |
| 703 | Façade 1 indoor temperature block (1: activated) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 704 | Façade 1 indoor temperature Block in °C | Input/Output | | | 2 bytes | C | R | W | T | - | temperature (°C) | Low |
| 705 | Façade 1 indoor temp. Block in °C (1:+ \| 0:-) | Input | | | 1 bit | C | - | W | - | - | step | Low |
| 706 | Façade 1 indoor temp. blk status (1: On \| 0: Off) | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 707 | Façade 1 indoor temperature via bit object (1: block) | Input | | | 1 bit | C | R | W | - | - | switch | Low |
| 708 | Façade 1 sun automation (1: activated) | Input | | | 1 bit | C | R | W | - | - | switch | Low |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 709 | Façade 1 sun automation Direction of the sun from (i... | Input | 4 bytes | C | R | W | T | - | angle (degree) | Low |
| 710 | Façade 1 sun automation Direction of the sun from (1... | Input | 1 bit | C | - | W | - | - | step | Low |
| 711 | Façade 1 sun automation Direction of the sun up to (... | Input | 4 bytes | C | R | W | T | - | angle (degree) | Low |
| 712 | Façade 1 sun automation Direction of the sun up to (... | Input | 1 bit | C | - | W | - | - | step | Low |
| 713 | Façade 1 sun automation Height of the sun from (in °) | Input | 4 bytes | C | R | W | T | - | angle (degree) | Low |
| 714 | Façade 1 sun automation Height of the sun from (1:+... | Input | 1 bit | C | - | W | - | - | step | Low |
| 715 | Façade 1 sun automation Height of the sun up to (in °) | Input | 4 bytes | C | R | W | T | - | angle (degree) | Low |
| 716 | Façade 1 sun autom. Height of the sun up to (1:+ \| 0:-) | Input | 1 bit | C | - | W | - | - | step | Low |
| 717 | Façade 1 sun autom. DirHeight status (1: On \| 0: Off) | Output | 1 bit | C | R | - | T | - | switch | Low |
| 718 | Façade 1 sun autom. Brightness measurement in Lux | Input | 2 bytes | C | - | W | T | - | lux (Lux) | Low |
| 719 | Façade 1 sun automation Brightness TLV in Lux | Input | 2 bytes | C | R | W | T | - | lux (Lux) | Low |
| 720 | Façade 1 sun automation Brightness TLV (1:+ \| 0:-) | Input | 1 bit | C | - | W | - | - | step | Low |
| 721 | Façade 1 sun autom. BRT Short status (1: On) | Output | 1 bit | C | R | - | T | - | switch | Low |
| 722 | Façade 1 sun autom. Brightness Long status (1: On) | Output | 1 bit | C | R | - | T | - | switch | Low |
| 723 | Façade 1 extension delay in min. | Input/Output | 2 bytes | C | R | W | T | - | time (min) | Low |
| 724 | Façade 1 extension delay in min. (1:+ \| 0:-) | Input | 1 bit | C | - | W | - | - | step | Low |
| 725 | Façade 1 short delay in seconds | Input/Output | 2 bytes | C | R | W | T | - | time (s) | Low |
| 726 | Façade 1 short delay in seconds (1:+ \| 0:-) | Input | 1 bit | C | - | W | - | - | step | Low |
| 727 | Façade 1 retraction delay in min. | Input/Output | 2 bytes | C | R | W | T | - | time (min) | Low |
| 728 | Façade 1 retraction delay in min. (1:+ \| 0:-) | Input | 1 bit | C | - | W | - | - | step | Low |
| 729 | Façade 1 movement position | Output | 1 byte | C | R | - | T | - | percentage (0..100%) | Low |
| 730 | Façade 1 slat position | Output | 1 byte | C | R | - | T | - | percentage (0..100%) | Low |
| 731 | Façade 1 status output channel (1: activate) | Input | 1 bit | C | R | W | - | - | switch | Low |
| 732 | Façade 1 state text | Output | 14 bytes | C | R | - | T | - | Character String (ASCII) | Low |
| 733 | Façade 1 channel status bit text | Output | 14 bytes | C | R | - | T | - | Character String (ASCII) | Low |
| 734 | Façade 1 channel status bit state | Output | 1 bit | C | R | - | T | - | switch | Low |
| 735 | Façade 1 channel delay | Output | 2 bytes | C | R | - | T | - | time (s) | Low |
| 736 | Façade 1 channel status bit selection (1:+ \| 0:-) | Input | 1 bit | C | - | W | - | - | step | Low |

Fig.5.25 Communication object of “Facades”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **609/.../620** | **Facade Wind measurement 1/../12 in m/s** | **Input** | **2 Bytes** | **C,W,T** | **9.005 speed (m/s)** |
| External wind measurement input 1/.../12 for façade automation. | | | | | |
| **621** | **Facade Wind automation blocking duration in min.** | **Input/ Output** | **2 Bytes** | **R,W,C,T** | **7.006 time (min)** |
| Set a time for blocking the automation after wind alarm is triggered. | | | | | |
| **622** | **Facade Wind automation blocking duration in min. (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Increments or decrements the wind block duration value in minutes. | | | | | |
| **623** | **Facade Rain auto. Delay in minutes** | **Input/Output** | **2 Bytes** | **R,W,C,T** | **7.006 time (min)** |

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|---|---|---|---|---|---|
| wait this time after rain alarm is triggered before activating the façade automation.(To ensure a rainy weather is confirmed). | | | | | |
| **624** | **Facade Rain auto. Delay in minutes (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Increments or decrements the rain detection delay duration value in minutes. | | | | | |
| **625** | **Facade Twilight threshold value in kLux** | **Input/Output** | **2 Bytes** | **R,W,C, T** | **9.004 lux (Lux)** |
| Set value of twilight brightness, if (Brightness < Threshold) = night / (Brightness > Threshold) = day | | | | | |
| **626** | **Facade Twilight threshold value in Lux (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Increments or decrements the Twilight value in Lux. | | | | | |
| **627** | **Facade Outside temperature (°C)** | **Input** | **2 Bytes** | **C,W,T** | **9.001 temperature (°C)** |
| Input the outdoor sensor for the façade automation. | | | | | |
| **628** | **Facade Heat protection threshold value in °C** | **Input/Output** | **2 Bytes** | **R,W,C, T** | **9.001 temperature (°C)** |
| Temperature heat protection value set to which when exceeded by actual temperature the protection mode is activated. | | | | | |
| **629** | **Facade Frost alarm threshold value in °C (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Increments or decrements the Heat protection threshold value in °C. | | | | | |
| **630** | **Facade Frost alarm start temperature in °C** | **Input/Output** | **2 Bytes** | **R,W,C, T** | **9.001 temperature (°C)** |
| Frost can be detected below this start TVL (Temperature Value limit). | | | | | |
| **631** | **Facade Frost alarm start** | **Input** | **1 Bit** | **W,C** | **1.007 step** |

| | | | | | |
|---|---|---|---|---|---|
| | **temperature in °C (1:+ \| 0:-)** | | | | |
| Increments or decrements the Frost start temperature in °C. | | | | | |
| **632** | **Facade Frost alarm start delay in hours** | **Input/Output** | **2 Bytes** | **R,W,C, T** | **7.007 time (h)** |
| Delay time before the frost alarm is triggered ensures that the frost condition is confirmed, taking into account not only a temperature drop but also precipitation. | | | | | |
| **633** | **Facade Frost alarm start temperature in hours (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Increments or decrements the Frost alarm start delay time in hours. | | | | | |
| **634** | **Facade Frost alarm stop temperature in °C** | **Input/Output** | **2 Bytes** | **R,W,C, T** | **9.001 temperature (°C)** |
| Frost is not detected anymore above this stop temperatue. | | | | | |
| **635** | **Facade Frost alarm stop temperature in °C (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Increments or decrements the Frost stop temperature in °C. | | | | | |
| **636** | **Facade Frost alarm stop delay in hours** | **Input/ Output** | **2 Bytes** | **R,W,C, T** | **7.007 time (h)** |
| Delay time before the frost alarm is deactivated ensures that the system confirms the frost condition has truly ended, accounting for any potential temperature fluctuations or precipitation change, rather than stopping the alarm immediately after a slight temperature rise. | | | | | |
| **637** | **Facade Frost alarm stop delay in hours (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Increments or decrements the Frost alarm stop delay time in hours. | | | | | |
| **638/.../645** | **Facade Pyranometer measured value 1/.../4 in W/m²** | **Input** | **2 Bytes 4 Bytes** | **C,W,T** | **9.022 power density (W/m2) 14.005 amplitude** |

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|---|---|---|---|---|---|
| External Pyranometer measurement input 1/.../4 for façade automation. | | | | | |
| **648** | **Facade X channel status output (1: activate)** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Output information for all façades can be activated when set to 1. | | | | | |
| **649** | **Facade X channel name** | **Output** | **14 Bytes** | **R,C,T** | **16.000 Character String (ASCII)** |
| Output of the façade name (when changing façades). Name of the parameter can be adapted. | | | | | |
| **650** | **Facade X channel (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.001 switch** |
| Change to the next/previous façade between façades 1 to 12. 1 = next, 0 = previous. This selection influences the façade displayed in associated objects. E. g. the name of the selected façade is output in object 649 and the status text in object 651. | | | | | |
| **651** | **Facade X channel state text** | **Output** | **14 Bytes** | **R,C,T** | **16.000 Character String (ASCII)** |
| Text of the condition of the selected façade. Saftey, Wind extention block, …). | | | | | |
| **652** | **Facade X channel status bit text** | **Output** | **14 Bytes** | **R,C,T** | **16.000 Character String (ASCII)** |
| Text output about the reason behind the current condition.(Wind alarm, Rain alarm, ...). | | | | | |
| **653** | **Facade X channel status bit state** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Status of the Status bit state (1 = True or not = 0 ) | | | | | |
| **654** | **Facade X channel delay** | **Output** | **2 Bytes** | **R,C,T** | **7.005 time(s)** |
| Displaying the delay time for the selected status-bit. Some automation functions have delay times that must first be run through before the status-bit is (re-)set. | | | | | |
| **655** | **Facade X channel status bit** | **Input** | **1 Bit** | **W,C** | **1.007 step** |

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| | **selection (1:+ \| 0:-)** | | | | |
| Selects the states of the automatic functions (channel status bit information) for the selected façade, that are then output in objects 652 and 653. 1 = next status info, 0 = previous status info. The text for the selected information is output in object 652 and the condition (true or false) is output in object 653. | | | | | |
| **656** | **Facade Wind simulation in m/s** | **Input** | **2 Bytes** | **R,W,C** | **9.005 speed (m/s)** |
| Simulation value of the Wind speed (m/s), used for façade different weather condtions tests. | | | | | |
| **657** | **Facade Wind extension blocking simulation (1: active)** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| If the wind extension block is active, the façade couldn't extend anymore.(Remain in its position). | | | | | |
| **658** | **Facade Wind alarm simulation (1: active)** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Simulation value of the Wind alarm. Ex: When = 1, move the face to the determined safe position.(if wind fuction is activated). | | | | | |
| **659** | **Facade Rain simulation (1: active)** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Simulation value of the Rain alarm. Ex: When = 1, move the face to the determined safe position.(if rain fuction is activated). | | | | | |
| **660** | **Facade External temperature in °C simulation** | **Input** | **2 Bytes** | **R,W,C** | **9.001 temperature (°C)** |
| Simulation value of the External Temperature in (°C) used for façade different weather condtions tests. | | | | | |
| **661** | **Facade Internal temperature in °C simulation** | **Input** | **2 Bytes** | **R,W,C** | **9.001 temperature (°C)** |
| Simulation value of the Internal Temperature in (°C) used for façade different weather condtions tests. | | | | | |

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| **662** | **Facade Brightness in Lux simulation** | **Input** | **2 Bytes** | **R,W,C** | **9.004 lux (Lux)** |
| Simulation value of the Brightness (Lux), used for façade different weather condtions tests. | | | | | |
| **663** | **Facade Sun intensity simulation in watts/m²** | **Input** | **2 Bytes** | **R,W,C** | **9.022 power density (W/m2)** |
| Simulation value of the Brightness (watts/m2)"intensity of radiant energy", The Output is 1. used for façade different weather condtions tests. | | | | | |
| **664** | **Facade Date simulation** | **Input** | **3 Bytes** | **R,W,C** | **11.001 date** |
| Date Value used for simulation. (Will affect the Sun location/direction/...). | | | | | |
| **665** | **Facade Time simulation** | **Input** | **3 Bytes** | **R,W,C** | **10.001 time of day Day** |
| Time Value used for simulation. (Will affect the Sun location/direction/...). | | | | | |
| **666** | **Facade Sun direction simulation in °, with date & time** | **Output** | **4 Bytes** | **R,C,T** | **14.007 angle (degree)** |
| Sun direction based on simulation Date and Time. | | | | | |
| **667** | **Facade Sun height simulation in °, with date & time** | **Output** | **4 Bytes** | **R,C,T** | **14.007 angle (degree)** |
| Sun Hight based on simulation Date and Time. | | | | | |
| **668** | **Facade Sun direction simulation in °** | **Input** | **4 Bytes** | **R,W,C** | **14.007 angle (degree)** |
| Sun direction in ° used for façade different weather condtions tests. | | | | | |
| **669** | **Facade Sun height simulation in °** | **Input** | **4 Bytes** | **R,W,C** | **14.007 angle (degree)** |
| Sun hight in ° used for façade different weather condtions tests. | | | | | |
| **670** | **Facade Reset simulation (1: reset)** | **Input** | **1 Bit** | **W,C** | **1.001 switch** |

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| Writing a 1 will reset all simulation values. | | | | | |
| **671** | **Facade Sun angle mode simulation (1: On \| 0: Off)** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| If activated = 1, Sun angle is recieved via Obj. Nr. 668 & 669. | | | | | |
| **672** | **Facade 1 simulation (1: On \| 0: Off)** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Set this value of the (1 = activate / 0 = deactivate) simulation for façade 1. | | | | | |
| **673** | **Facade1 block** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| If activated = 1 the façade 1 can't be controlled. (Default) | | | | | |
| **674** | **Facade 1 safety (1: On \| 0: Off)** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Status of the saftey function that ensure the protection and proper functioning of the façade 1 in different weather conditions (is it depending Wind, Rain, Frost). (1 = on, 0 = off) | | | | | |
| **675** | **Facade 1 wind extension block (1: On \| 0: Off)** | **Input** | **1 Bit** | **W,C** | **1.001 switch** |
| Is a safety feature used to protect the façade 1 from potential damage (prevent further extention of the façade) caused by high winds. (Remain in same position). (1 = on, 0 = off) | | | | | |
| **676** | **Facade 1 wind extension block threshold value in m/s** | **Input** | **2 Bytes** | **R,W,C, T** | **9.005 speed (m/s)** |
| Reference point of setting and/or reading the Fac.1 Wind threshold value. | | | | | |
| **677** | **Facade 1 wind extension block threshold value (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 the Fac.1 Wind threshold value. | | | | | |
| **678** | **Facade 1 wind extension block status (1: On \| 0: Off)** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Status of the wind safety feature used with façade 1. (1 = on, 0 = off) | | | | | |

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| **679** | **Facade 1 wind alarm (1: On \| 0: Off)** | **Input** | **1 Bit** | **W,C** | **1.001 switch** |
| Alarm triggered after the wind speed exceeds the threshold value 1 and can initiate an action. (1 = on, 0 = off) | | | | | |
| **680** | **Facade 1 wind alarm threshold value in m/s** | **Input** | **2 Bytes** | **R,W,C, T** | **9.005 speed (m/s)** |
| Reference point of setting and/or reading the Façade 1 Wind alarm threshold value. | | | | | |
| **681** | **Facade 1 wind alarm threshold value (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 Façade 1 Wind alarm threshold value. | | | | | |
| **682** | **Facade 1 wind alarm status (1: On \| 0: Off)** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Status of the wind alarm for façade 1 (1 = alarm / wind value exceeded threshold value 1, 0 = no alarm). Transmission behaviour can be set within the parameters.Can also trigger an action. Will be set to 1 for safety reasons, when no value sent has been sent for 48 hours | | | | | |
| **683** | **Facade 1 frost alarm status (1: On \| 0: Off)** | **Output** | **1 Bit** | **R,W,C,T** | **1.001 switch** |
| Status of the frost alarm for façade 1 (1 = alarm / wind value exceeded threshold value 1, 0 = no alarm). Transmission behaviour can be set within the parameters.Can also trigger an action. Will be set to 1 for safety reasons, when no value sent has been sent for 48 hours | | | | | |
| **684** | **Facade1 release/block rain automatic** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Façade 1 rain automation function activation = 1 or Block = 0 when rain condition is true. (Default). | | | | | |
| **685** | **Facade 1 rain alarm status (1: On \| 0: Off)** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Status of the rain alarm (1 = alarm / precipitation detected, 0 = no alarm). | | | | | |

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|---|---|---|---|---|---|
| **686** | **Facade1 release/block timed opening** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Write (Active = 1 or deactivated = 0) façade 1 timed opening function. | | | | | |
| **687** | **Facade 1 timed opening status (1: On \| 0: Off)** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Status of façade 1 timed opening function.(1= Timed Opening function is active). (1 = on, 0 = off) | | | | | |
| **688** | **Facade1 outside temp. Release/block block** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Façade 1 Blocking function based on when outdoor temp is below the threshold value. (Active = 1 or deactivated = 0) . | | | | | |
| **689** | **Facade1 outside temp. Block in °C** | **Input/ Output** | **2 Bytes** | **R,W,C,T** | **9.001 temperature (°C)** |
| It is a Reference Point of façade 1 used for setting or reading the Temperature block value in °C. | | | | | |
| **690** | **Facade1 outside temp. Block in °C (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 the external Temperature block threshold value for façade 1. | | | | | |
| **691** | **Facade1 outside temp. Block status (1: On \| 0: Off)** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Status of the Façade 1 external Temperature block function. (Active = 1 or inactive = 0). | | | | | |
| **692** | **Facade1 release/block timed closure** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Write (activated = 1 or deactivated = 0) façade 1 timed closure function. Default. | | | | | |
| **693** | **Facade 1 timed closure status (1: On \| 0: Off)** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Status of façade 1 timed closure function.(1= Timed Closure function is active). (1 = on, 0 = off) | | | | | |

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|---|---|---|---|---|---|
| **694** | **Facade1 release/block night closure** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Write (activated = 1 or deactivated = 0) façade 1 night closure function. Default. | | | | | |
| **695** | **Facade 1 night closure status (1: On \| 0: Off)** | | **1 Bit** | **R,C,T** | **1.001 switch** |
| Status of façade 1 timed closure function.(1= Night Closure function is active, 0=Night Closure function is deactivate). | | | | | |
| **696** | **Facade1 release/block heat protection** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Write (activated = 1 or deactivated = 0) façade 1 Heat Protection function. Default. | | | | | |
| **697** | **Facade 1 heating protection status (1: On \| 0: Off)** | | **1 Bit** | **R,C,T** | **1.001 switch** |
| Status of façade 1 Heat Protection function.(1= Heat Protection function is active,0= Heat Protection function is deactivate). | | | | | |
| **698** | **Facade1 release/block pyranometer** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Pyranometer sensor input for façade 1 is (1 = activated or 0 = deactivated). Default. | | | | | |
| **699** | **Facade 1 pyranometer in W/m²** | **Input/ Output** | **2 Bytes** | **R,W,C, T** | **9.022 power density (W/m2)** |
| Reference value used for setting or reading the Façade 1 Pyranometer (Light intensity) threshold value. | | | | | |
| **700** | **Facade 1 pyranometer in W/m² (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 the Façade 1 Pyranometer (Light intensity) threshold value. | | | | | |
| **701** | **Facade 1 pyranometer status (1:** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |

| | | | | | |
|---|---|---|---|---|---|
| | **On \| 0: Off)** | | | | |
| Status of the Façade 1 Pyranometer (Light intensity). (1: Light intensity value exceeded threshold). | | | | | |
| **702** | **Facade 1 internal temperature in °C** | **Input** | **2 Bytes** | **C,W,T** | **9.001 temperature (°C)** |
| Indoor input temperature value used for setting Façade 1 automation. | | | | | |
| **703** | **Facade1 release/block inside temp. block** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Temperature sensor input for façade 1 is (1 = activated or 0 = deactivated). Default. | | | | | |
| **704** | **Facade1 inside temp. Block in °C** | **Input/ Output** | **2 Bytes** | **R,W,C,T** | **9.001 temperature (°C)** |
| Threshold value used to block the façade 1 according to the internal Temperature in °C. | | | | | |
| **705** | **Facade1 inside temp. Block in °C (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 the Fac.1 internal Temperature block threshold value. | | | | | |
| **706** | **Facade1 inside temp. Block status (1: On \| 0: Off)** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Status of the Façade internal Temperature block. (1 = Blocking Function is active, 0=Blocking Function is deactivate). | | | | | |
| **707** | **Facade 1 internal temperature block release/block via bit object** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Send 1 to this obj to activate Façade 1 internal temp blocking function. | | | | | |
| **708** | **Facade1 release/block sun auto.** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Send 1 to this obj to activate Façade 1 automation based on Sun (1 = active/ 0 = inactive). Default. | | | | | |
| **709** | **Facade1 Sun auto. Azimuth from** | **Input** | **4 Bytes** | **R,W,C,T** | **14.007 angle (degree)** |

| | | | | | |
|---|---|---|---|---|---|
| | **(in °)** | | | | |
| Used to set the Sun starting Azimuth angle in (°). | | | | | |
| **710** | **Facade1 Sun auto. Azimuth from (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 Fac.1 Sun starting Azimuth angle value. | | | | | |
| **711** | **Facade1 Sun auto. Azimuth up to (in °)** | **Input** | **4 Bytes** | **R,W,C,T** | **14.007 angle (degree)** |
| Used to set Fac.1 Sun Ending Azimuth angle in (°). | | | | | |
| **712** | **Facade1 Sun auto. Azimuth up to (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 Fac.1 Sun ending Azimuth angle value. | | | | | |
| **713** | **Facade1 Sun auto. Elevation from (in °)** | **Input** | **4 Bytes** | **R,W,C,T** | **14.007 angle (degree)** |
| Used to set Fac.1 Sun starting Elevation angle in (°). | | | | | |
| **714** | **Facade1 Sun auto. Elevation from (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 Fac.1 Sun starting Elevation angle value. | | | | | |
| **715** | **Facade1 Sun auto. Elevation up to (in °)** | **Input** | **4 Bytes** | **R,W,C,T** | **14.007 angle (degree)** |
| Used to set Fac.1 Sun Ending Elevation angle in (°). | | | | | |
| **716** | **Facade1 Sun auto. Elevation up to (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 Fac.1 Sun ending Elevation angle value. | | | | | |
| **717** | **Facade1 Sun auto. AziEle status** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |

| | | | | | |
|---|---|---|---|---|---|
| | **(1: On \| 0: Off)** | | | | |
| If the Sun is within the set angle range according to façade 1 automation then the value is 1. | | | | | |
| **718** | **Facade1 Sun auto. Brightness measurement in lux** | **Input** | **2 Bytes** | **C,W,T** | **9.004 lux (Lux)** |
| Brightness measured for Fac.1 in Lux. | | | | | |
| **719** | **Facade1 Sun auto. Brightness threshold value in lux** | **Input** | **2 Bytes** | **R,W,C,T** | **9.004 lux (Lux)** |
| Reference point of setting and/or reading the Sun Auto brightness Fac.1 threshold value. | | | | | |
| **720** | **Facade1 Sun auto. Brightness threshold (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 the Sun Auto brightness Fac.1 threshold value. | | | | | |
| **721** | **Facade1 Sun auto. Bright. Short status (1: On)** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Status is high when Brightness is above the Sun auto. Threshold, longer than short delay setting value. | | | | | |
| **722** | **Facade1 Sun auto. Bright. Long status (1: On)** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Status is high when Brightness is above the Sun auto. Threshold, longer than Long delay setting value. | | | | | |
| **723** | **Facade 1 extension delay in min.** | **Input/ Output** | **2 Bytes** | **R,W,C,T** | **7.006 time (min)** |
| Value used for setting extention time in Minutes in which when brightness value is over thershold for more then this time it activates the façade 1 sun protection. | | | | | |
| **724** | **Facade 1 extension delay in min. (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |

| | | | | | |
|---|---|---|---|---|---|
| Used to increment=1 or decrement=0 the Fac.1 extension delay value. | | | | | |
| **725** | **Facade 1 short delay in seconds** | **Input/ Output** | **2 Bytes** | **R,W,C,T** | **7.005 time(s)** |
| Reference point of setting extention time in Seconds in which when brightness value is over thershold for more then this time it activated the façade 1 sun protection. | | | | | |
| **726** | **Facade 1 short delay in seconds (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 the Fac.1 extension delay value. | | | | | |
| **727** | **Facade 1 retraction delay in min.** | **Input/ Output** | **2 Bytes** | **R,W,C,T** | **7.006 time (min)** |
| Value used for setting retraction time in Seconds in which when brightness value is below thershold for more then this time it deactivated the façade 1 sun protection. | | | | | |
| **728** | **Facade 1 retraction delay in min. (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Used to increment=1 or decrement=0 the Fac.1 retraction delay value. | | | | | |
| **729** | **Facade 1 movement position** | **Output** | **1 Bit** | **R,C,T** | **5.001 percentage (0...100%)** |
| Send the Movment position on the bus to control the actuators of the façade 1. | | | | | |
| **730** | **Facade1 blind position** | **Output** | **1 Bit** | **R,C,T** | **5.001 percentage (0...100%)** |
| Send the Slats position on the bus to control the actuators of the façade 1. | | | | | |
| **731** | **Facade 1 channel status output (1: On \| 0: Off)** | **Input** | **1 Bit** | **R,W,C** | **1.001 switch** |
| Indicates if Fac.1 channel is activated or not. | | | | | |
| **732** | **Facade 1 channel state text** | **Output** | **14 Bytes** | **R,C,T** | **16.000 Character String (ASCII)** |

| | | | | | |
|---|---|---|---|---|---|
| Text of the condition of façade 1 Saftey, Wind extention block, …). | | | | | |
| **733** | **Facade 1 channel status bit text** | **Output** | **14 Bytes** | **R,C,T** | **16.000 Character String (ASCII)** |
| Text output about the reason behind the current condition.(Wind alarm, Rain alarm, ...). | | | | | |
| **734** | **Facade 1 channel status bit state** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Status of the Status bit state (1 = True or not = 0 ). | | | | | |
| **735** | **Facade 1 channel delay** | **Output** | **2 Bytes** | **R,C,T** | **7.005 time(s)** |
| Displaying the delay time for the selected status-bit. Some automation functions have delay times that must first be run through before the status-bit is (re-)set. | | | | | |
| **736** | **Facade 1 channel status bit selection (1:+ \| 0:-)** | **Input** | **1 Bit** | **W,C** | **1.007 step** |
| Selects the states of the automatic functions (channel status bit information) for façade 1, that are then output in objects 732 and 733. 1 = next status info, 0 = previous status info. The text for the selected information is output in object 732 and the condition (true or false) is output in object 733. | | | | | |

Table5.25 Communication object of “Facades”

## 5.26 Communication object of “Computer”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1530 | Computer 1: Input I1 | Input | | | 2 bytes | C | R | W | T | - | pulses difference | Low |
| 1531 | Computer 1: Input I2 | Input | | | 2 bytes | C | R | W | T | - | pulses difference | Low |
| 1532 | Computer 1: Input I3 | Input | | | 2 bytes | C | R | W | T | - | pulses difference | Low |
| 1533 | Computer 1: Output O1 | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 1534 | Computer 1: Output O2 | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 1535 | Computer 1: Condition text | Output | | | 14 bytes | C | R | - | T | - | Character String (ASCII) | Low |
| 1536 | Computer 1: Monitoring status | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 1537 | Computer 1: Block (1: block) | Input | | | 1 bit | C | - | W | - | - | switch | Low |

Fig.5.26 Communication object of “Computer”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **1530/.../ 1532** | **Calculator 1: Input I1/2/3** | **Input** | **4 Bytes** | **R,W,C,T** | **Depending on setting** |
| First Input for Computer 1/2/3 (bit/byte/percentage/degree/...). | | | | | |
| **1533/15 34** | **Calculator 1: Output O1/2** | **Output** | **4 Bytes** | **R,C,T** | **Depending on setting** |
| First Output for Computer 1 (bit/byte/percentage/degree/...). | | | | | |
| **1535** | **Calculator 1: Condition text** | **Output** | **14 Bytes** | **R,C,T** | **16.000 Character String (ASCII)** |
| Text output for the condition: met(True)/not met(False). | | | | | |
| **1536** | **Calculator 1: Monitoring status** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| Indicates the current condition of the monitored inputs, If no value recieved for the inputs in the set time range, This status is True = 1 indicating an issue. Default | | | | | |
| **1537** | **Calculator 1: Block (1: Block)** | **Input** | **1 Bit** | **W,C** | **1.001 switch** |
| Used to receive a binary state block = 1 or allow = 0 the switching of an output Obj.No. 1533 & 1534. | | | | | |

Table5.26 Communication object of “Computer”

## 5.27 Communication object of “Week time switch”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1600 | Weekly time switch period 1: Switch-on time | Input | | | 3 bytes | C | R | W | T | - | time of day | Low |
| 1601 | Weekly time switch period 1: Switch-off time | Input | | | 3 bytes | C | R | W | T | - | time of day | Low |
| 1602 | Weekly time switch period 1: Switching output | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 1603 | Weekly time switch period 1: 8-bit output | Output | | | 1 byte | C | R | - | T | - | counter pulses (0..255) | Low |

Fig.5.27 Communication object of “Week time switch”

| No. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **1600** | **Weekly timer period 1: Switch-on time** | **Input** | **R,W,C,T** | **3 Bytes** | **10.001 time of day** |
| Sets the specific time (hours and minutes) at which the WTP 1 should start for selected days. WTP (Weekly timer period). | | | | | |
| **1601** | **Weekly timer period 1: Off time** | **Input** | **R,W,C,T** | **3 Bytes** | **10.001 time of day** |
| Sets the specific time (hours and minutes) at which the WTP 1 should end for selected days. | | | | | |
| **1602** | **Weekly timer period 1: Switching output** | **Output** | **R,C,T** | **1 Bit** | **1.001 switch** |
| Value is High(1) when WTP 1 is active & Value is Low(0) when WTP 1 is inactive . | | | | | |
| **1603** | **Weekly timer period 1: 8-bit output** | **Output** | **R,C,T** | **1 Byte** | **5.010 counter pulses (0...255)** |
| According to WTP 1 Switching output, two preset values possible (0-255). Value If WTP 1 is active & Value If WTP 1 is Not-active. | | | | | |

Table 5.27 Communication object of “Week time switch”

## 5.28 Communication object of “Calendar time switch”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1720 | Calendar time switch period 1: Start date | Input | | | 3 bytes | C | R | W | T | - | date | Low |
| 1721 | Calendar time switch period 1: End date | Input | | | 3 bytes | C | R | W | T | - | date | Low |
| 1722 | Cal. time switch period 1 seq. 1: Switch-on time | Input | | | 3 bytes | C | R | W | T | - | time of day | Low |
| 1723 | Cal. time switch period 1 seq. 1: Switch-off time | Input | | | 3 bytes | C | R | W | T | - | time of day | Low |
| 1724 | Cal. time switch period 1 seq. 1: Switching output | Output | | | 1 bit | C | R | - | T | - | switch | Low |
| 1725 | Calendar time switch period 1 seq. 1: 8-bit output | Output | | | 1 byte | C | R | - | T | - | counter pulses (0..255) | Low |

Fig.5.28 Communication object of “Calendar time switch”

| NO. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **1720** | **Calendar timer period 1: Start date** | **Input** | **3 Bytes** | **R,W,C,T** | **11.001 date** |
| The starting Month and Day of the CTP 1 . CTP (Calendar timer period) | | | | | |
| **1721** | **Calendar timer period 1: End date** | **Input** | **3 Bytes** | **R,W,C,T** | **11.001 date** |
| The ending Month and Day of the CTP 1. | | | | | |
| **1722** | **Calendar timer period 1 sequence 1: Switch-on time** | **Input** | **3 Bytes** | **R,W,C,T** | **10.001 time of day** |
| CTP 1 Seq 1 Switch On Time: Hours: 0 to 23 / Minutes: 0 to 59. | | | | | |
| **1723** | **Calendar timer period 1 sequence 1: Off time** | **Input** | **3 Bytes** | **R,W,C,T** | **10.001 time of day** |
| CTP 1 Seq 1 Switch Off Time : Hours: 0 to 23 / Minutes: 0 to 59. | | | | | |
| **1724** | **Calendar timer period 1 sequence 1: Switching output** | **Output** | **1 Bit** | **R,C,T** | **1.001 switch** |
| If the CTP 1 Seq 1 is active and the current time falls within the defined time range, the output is high (1); If the period is not active or the current time is outside the defined time range, the output is low (0). | | | | | |
| **1725** | **Calendar timer period 1** | **Output** | **1 Byte** | **R,C,T** | **5.010 counter pulses (0...255)** |

| | | | | | |
|---|---|---|---|---|---|
| | **sequence 1: 8-bit output** | | | | |
| According to CTP 1 Seq 1 Switching output, two preset values in the parameters are possible (0-255). Value If CTP 1 Seq 1 is active & Value If CTP 1 Seq 1 is Not-active. | | | | | |

Table5.28 Communication object of “Calendar time switch”

## 5.29 Communication object of “Logic”

| Number | Name | Object Function | Description | Group Address | Length | C | R | W | T | U | Data Type | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1780 | Logic input 1 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1781 | Logic input 2 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1782 | Logic input 3 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1783 | Logic input 4 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1784 | Logic input 5 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1785 | Logic input 6 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1786 | Logic input 7 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1787 | Logic input 8 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1788 | Logic input 9 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1789 | Logic input 10 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1790 | Logic input 11 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1791 | Logic input 12 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1792 | Logic input 13 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1793 | Logic input 14 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1794 | Logic input 15 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1795 | Logic input 16 | Input | | | 1 bit | C | - | W | - | - | boolean | Low |
| 1800 | AND logic 1: 1 bit switching output | Output | | | 1 bit | C | R | - | T | - | boolean | Low |
| 1801 | AND logic 1: 8 bit output A | Output | | | 1 byte | C | R | - | T | - | counter pulses (0..255) | Low |
| 1802 | AND logic 1: 8 bit output B | Output | | | 1 byte | C | R | - | T | - | counter pulses (0..255) | Low |
| 1803 | AND logic 1: Block | Input | | | 1 bit | C | - | W | - | - | switch | Low |
| 1832 | OR logic 1: 1 bit switching output | Output | | | 1 bit | C | R | - | T | - | boolean | Low |
| 1833 | OR logic 1: 8 bit output A | Output | | | 1 byte | C | R | - | T | - | counter pulses (0..255) | Low |
| 1834 | OR logic 1: 8 bit output B | Output | | | 1 byte | C | R | - | T | - | counter pulses (0..255) | Low |
| 1835 | OR logic 1: Block | Input | | | 1 bit | C | - | W | - | - | switch | Low |

Fig.5.29 Communication object of “Logic”

| No. | Name | Function | Types | Property | DPT |
|---|---|---|---|---|---|
| **1780/.../1795** | **Logic input 1/.../16** | **Input** | **W,C** | **1 Bit** | **1.002 boolean** |
| Logical input 1/.../16 of type bit to be used in logical funtions. | | | | | |
| **1800** | **AND logic 1: 1-bit switching output** | **Output** | **R,C,T** | **1 Bit** | **1.002 boolean** |
| Output of And Logic 1 according to 4 available inputs. | | | | | |
| **1801** | **AND logic 1: 8-bit output A** | **Output** | **R,C,T** | **1 Byte** | **5.001 percentage (0...100%)** |
| Output A of And Logic 1 (1Byte Value set in the parameters) | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **1802** | **AND logic 1: 8-bit output B** | **Output** | **R,C,T** | **1 Byte** | **5.001 percentage (0...100%)** |
| Output B of And Logic 1 (1Byte Value set in the parameters) | | | | | |
| **1803** | **AND logic 1: Block** | **Input** | **W,C** | **1 Bit** | **1.001 switch** |
| Used to block the output of And Logic 1 (1 = block & 0 = released). Default | | | | | |
| **1832** | **OR logic 1: 1-bit switching output** | **Output** | **R,C,T** | **1 Bit** | **1.002 boolean** |
| Output of OR Logic 1 according to 4 available inputs. | | | | | |
| **1833** | **OR logic 1: 8-bit output A** | **Output** | **R,C,T** | **1 Byte** | **5.001 percentage (0...100%)** |
| Output A of OR Logic 1 (1Byte Value set in the parameters) | | | | | |
| **1834** | **OR logic 1: 8-bit output B** | **Output** | **R,C,T** | **1 Byte** | **5.001 percentage (0...100%)** |
| Output A of OR Logic 1 (1Byte Value set in the parameters) | | | | | |
| **1835** | **OR logic 1: Block** | **Input** | **W,C** | **1 Bit** | **1.001 switch** |
| Used to block the output of OR Logic 1 (1 = block & 0 = released). Default | | | | | |

Table 5.29 Communication object of “Logic”