

	<h2>application software</h2>	
<ul style="list-style-type: none"> ▲ Manufacturers ▲ Hager Electro ▲ Physical sensors <ul style="list-style-type: none"> Weather data 	<h3>KNX GPS Weather station</h3> <p><i>Electrical/Mechanical characteristics: see product user manual</i></p>	

	Product reference	Product designation	Application software ref	TP device Radio device
	TXE530	KNX GPS Weather station	STXE530 1.x Version	

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1. General

1.1 About this guide

The purpose of this manual is to describe the operation and configuration of KNX devices using ETS software or Easy tool software.

It consists of 4 parts:

- General information.
- The parameters and KNX objects available.
- The Easy tool configurations are available.
- Technical characteristics.

1.2 About the program ETS

1.2.1 ETS compatibility

The application programs are compatible with ETS4 and ETS5. They can be downloaded from our website under the order number.

ETS Version	File extension of compatible files
ETS4 (V4.1.8 or higher)	*.knxprod
ETS5	*.knxprod

1.2.2 Application descriptions

Application	Product reference
STXE530	TXE530

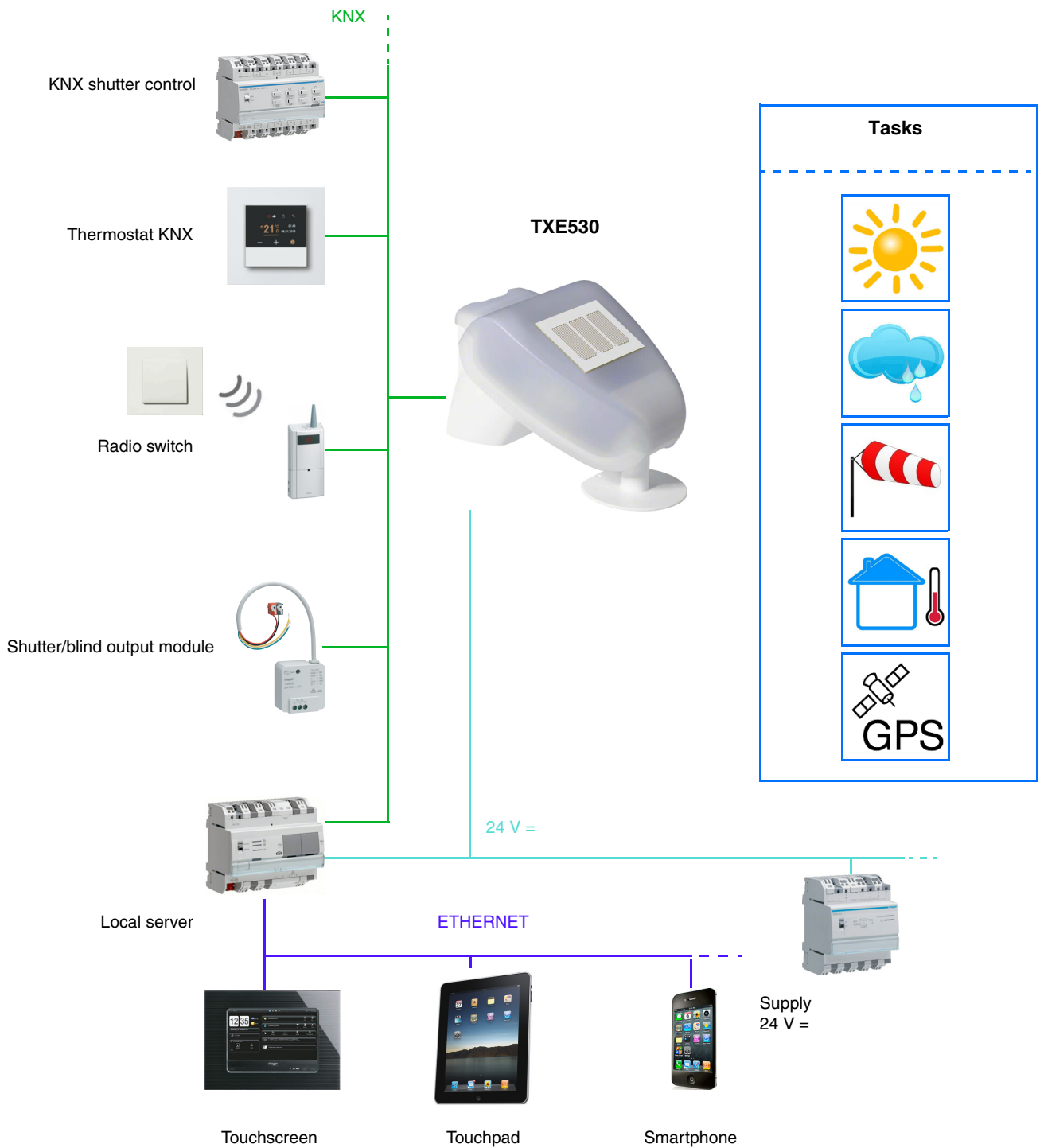
1.3 Easy tool software appearance

This product can also be configured using the TXA100 configuration tool. It is composed of a TJA665 configuration server. It is essential to update the configuration server software version. (Please refer to the TXA100 user manual).

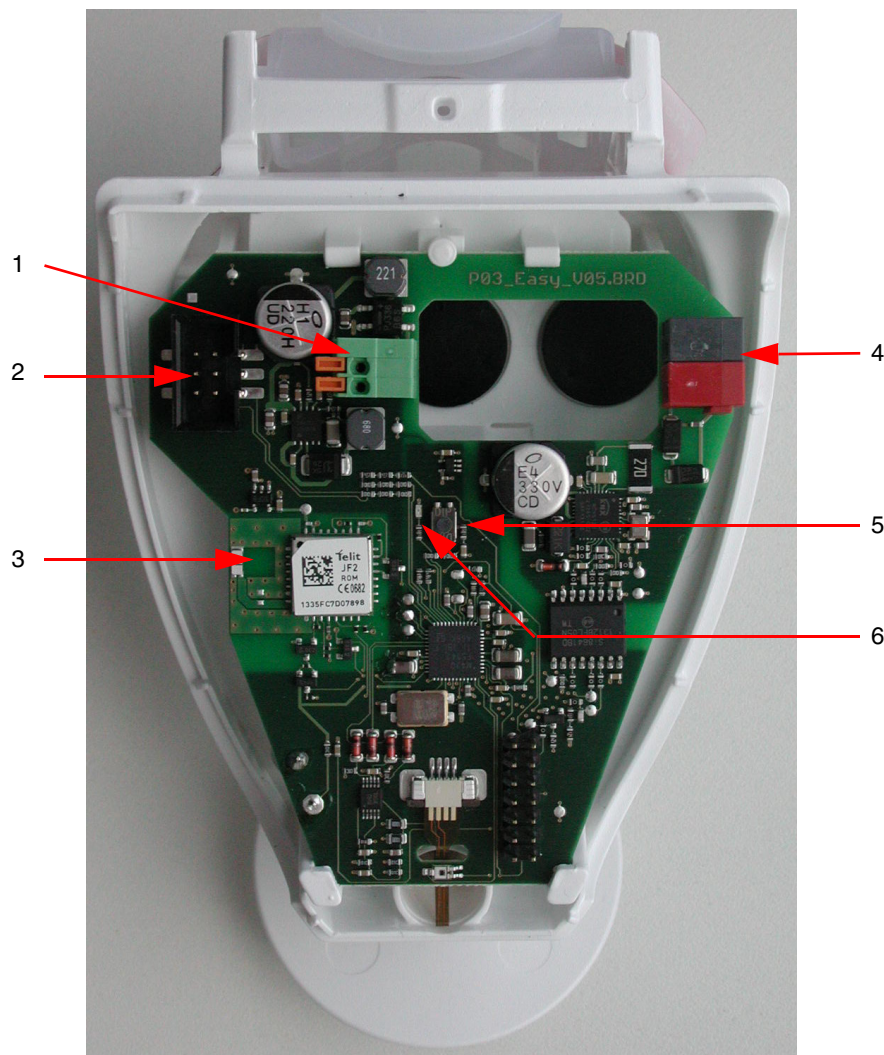
2. General Description

2.1 Installation of the device

2.1.1 Overview presentation



2.1.2 Connection



- 1 Spring terminal for power, for solid conductors up to 1.5 mm² or for stranded conductors
- 2 Location for the built-in rain sensor connector on the cover of the housing
- 3 GPS antenna
- 4 Terminal KNX +/-
- 5 Physical addressing button
- 6 Physical addressing LED

2.1.3 Physical addressing

In order to perform the physical addressing or to check whether or not the bus is connected, press the lighted push button (see chapter 2.1.2 for the button location).

Light on = bus connected and ready for physical addressing.

Programming mode is activated, until the physical address is transferred from ETS. Pressing the button again, exits programming mode.

2.1.4 Status of the station in the event of a power failure and re-start

- **Status of the station in the event of a power failure in the bus or auxiliary:** the device does not broadcast.
- **Status of the station in the event of power restoration to the bus or auxiliary and after programming or restarting:**
The device sends all of the actions, as well as the switching outputs and statuses, according to the timelines defined below:

Tasks	Time
Rain, wind and frost alarms	20 s
Luminosity Wind speed measurement Precipitation detection Temperature recordings	25 s
Shading control Heat protection and heat recovery	30 s

The date and time are emitted from the first GPS signal following power failure or downloading.

2.2 Function modules of the application

The KNX-GPS weather station measures the temperature, wind speed and luminosity. It detects precipitations and receives the time and location data through the GPS signal. In addition, it calculates the exact position of the sun (azimuth and elevation) using the site coordinates and time.

All of the weather data is sent to the bus at regular intervals. This data can be received and operated by other KNX products or a supervision system that is able to define the thresholds and establish logical combinations from among several quantities to ultimately control the outputs depending on the threshold values.

The weather station enables direct control of the switch outputs thanks to the pre-defined alarm levels: rain and frost alarm, and 3 wind alarm levels. It can also ensure the shading or heat recovery functions by tracking the position of shutters or the tilt of slats for blinds.

The sensors, data operation electronics and bus coupler electronics are stored in the compact housing of the KNX-GPS station.

■ Luminosity and sun position

The light intensity is measured using a luminosity sensor. At the same time, the KNX-GPS weather station calculates the position of the sun (azimuth and elevation) using the time and location.

■ Wind speed measurement

The wind speed electronic record provides quiet and reliable operation, even during hail, snow and minus temperatures.

Turbulence and upslope winds close to the weather station are also recorded. This information is transmitted periodically and can be used as a wind alarm control.

■ Precipitation detection

The surface of the sensor is heated so that only droplets and flakes are identified as precipitation, thereby disqualifying fog or thaw. When the rain or snow stops, the sensor dries quickly and indicates the end of precipitation. This information is transmitted periodically and can be used as a rain alarm control.

■ Temperature recordings

The outdoor temperature is measured using a sensor. This information is transmitted periodically and can primarily be used as a display or, for example, as a frost alarm control.

■ Operation associated with domovea

The quantities measured (lux °C m/s) can be used by domovea to configure the levels and control the ON/OFF outputs when the threshold is exceeded.

■ Date and time - GPS function

The weather station receives the date and time via its built-in GPS receiver. This allows it to manage the switch to daylight saving time between winter and summer.

■ Rain, wind and frost alarms

This function issues an alarm according to the weather data gathered up to a predefined threshold.

There are 3 types of alarms:

- Rain alarm
- Frost alarm
- Wind alarm defined by 3 thresholds (Alarm 1 - 4 m/s, Alarm 2 - 8 m/s, Alarm 3 - 12 m/s)

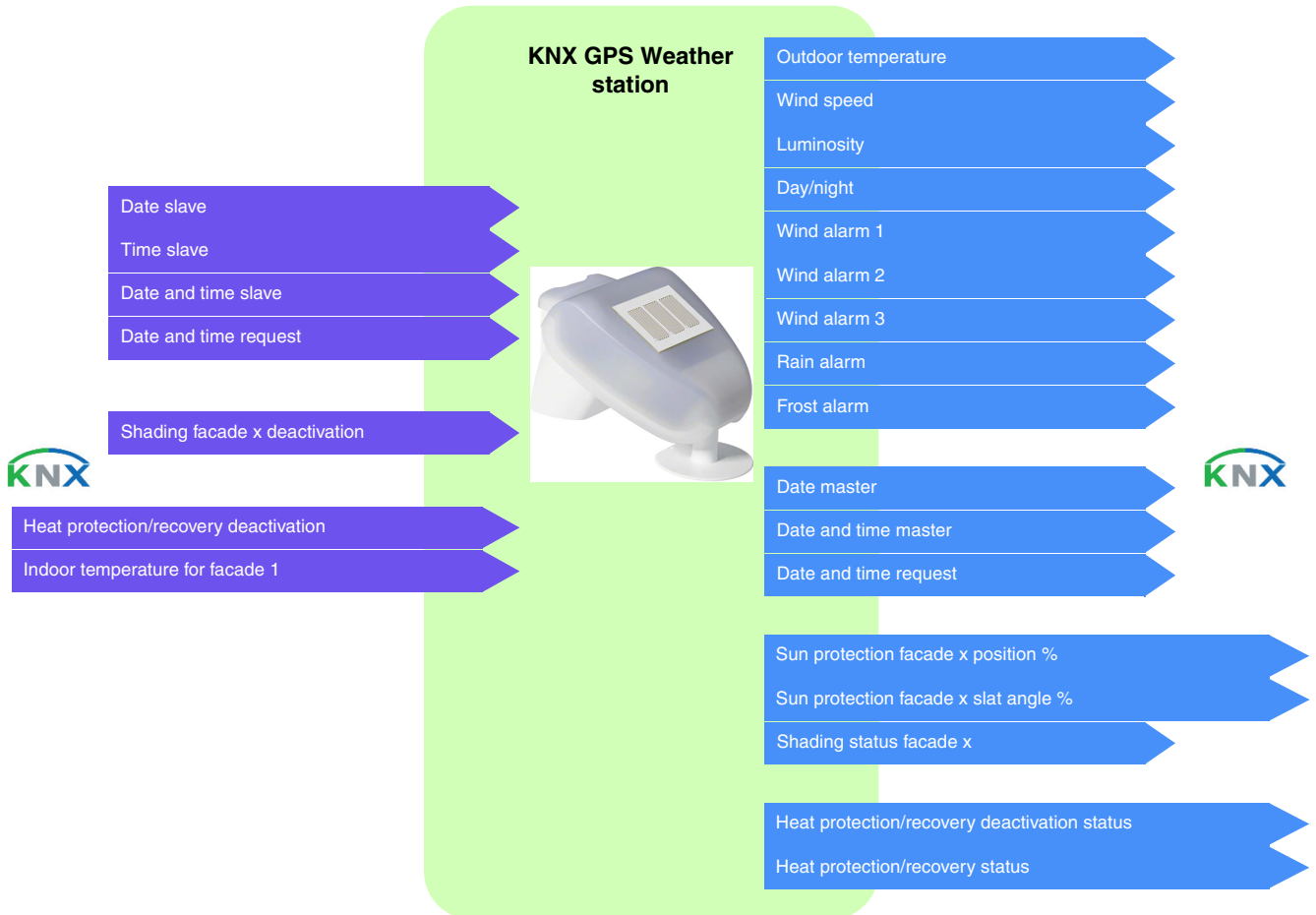
■ Shading control

This function manages up to 4 facades with several levels of shading depending on the angle of slat blinds or shutter closure.

■ Heat protection and heat recovery

This function is involved in indoor temperature management, depending on the level of sunlight and the season. In summer, the heat protection function positions the shutters or blinds to prevent the part from becoming too warm. In winter, the heat recovery function opens the shutters or blinds to heat up the part using sunlight. For facade 1 only, the purpose of the weather station is to receive the ambient temperature of facade 1 (using a master part) to more accurately manage heat protection and recovery.

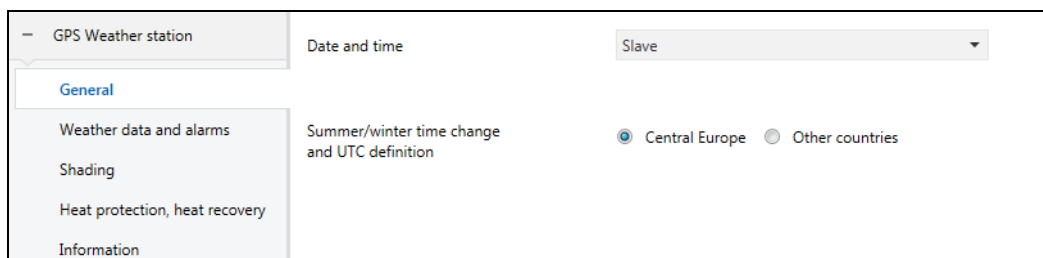
Communication objects



3. Programming by ETS

3.1 Parameters

3.1.1 General



3.1.1.1 Date and time

The GPS module built into the device is able to send the date and time to the bus. When the weather station is set without restrictions, data is sent every 12 hours (fixed value) and during the time changes between summer and winter.

A single time must be managed for the different sub-systems. This time may come from different sources::

- domovea if connected to the internet
- weather station
- clock

If there are several time sources on the system, the priority is as follows:

- internet via the service module
- GPS
- local time source (clock ...)

Parameter	Description	Value
Date and time	The device uses the time data from another device on the bus.	Slave*
	The device receives the time data through GPS and sends it to the KNX bus every 12 hours.	Master
	The device receives the time data through the GPS and does not send it to the KNX bus.	Autonomous

Date and time for Master

- Communication objects:
- [12 - Date and time request - Input \(1 Bit - 1.017 DPT_Trigger\)](#)
 - [13 - Date master - Output \(3 Byte - 11.001 DPT_Date\)](#)
 - [14 - Time master - Output \(3 Byte - 10.001 DPT_TimeOfDay\)](#)
 - [15 - Date and time master - Output \(8 Byte - 19.001 DPT_Date_Time\)](#)

In the first instance, the current date and time can be set via the ETS. The weather station works with this data until a valid GPS signal is received for the first time.

* Default value

Date and time for Slave

Communication objects:

- 9 - Date slave - Input** (3 Byte - 11.001 DPT_Date)
- 10 - Time slave - Input** (3 Byte - 10.001 DPT_TimeOfDay)
- 11 - Date and time slave - Input** (8 Byte - 19.001 DPT_Date_Time)
- 13 - Date master - Output** (3 Byte - 11.001 DPT_Date)
- 14 - Time master - Output** (3 Byte - 10.001 DPT_TimeOfDay)
- 15 - Date and time master - Output** (8 Byte - 19.001 DPT_Date_Time)
- 16 - Date and time request - Output** (1 Bit - 1.017 DPT_Trigger)

In slave mode, the weather station synchronizes itself to the date and time of the master system. However, it always operates with its own date and time when calculating the azimuth and elevation.

When the weather station does not receive date and time information over 2 successive tries (fixed value), it sends a request via the object (Date and time request). If there is no response, the weather station switches automatically to master mode. When the master device re-sends the date and time, the weather station returns to slave mode.

Date and time in Autonomous mode

The weather station operates with its own date and time to calculate the azimuth and elevation. No item is sent to or read on the KNX bus.

3.1.1.2 Time change

The switch-over for daylight saving time (summer/winter and winter/summer) is carried out automatically or using specific settings.

GPS Weather station

- General
- Weather data and alarms
- Shading
- Heat protection, heat recovery shading
- Heat protection, heat recovery
- Information

Date and time: Slave

Summer/winter time change and UTC definition: Central Europe Other countries

Winter to summer time change on

First: Sunday

After

Day: 25

Month: 3

Hour: 2

Minute: 0

Summer time offset in minutes: 60

Summer to winter time change on

First: Sunday

After

Day: 25

Month: 10

Hour: 3

Minute: 0

UTC offset in minutes: 60

Parameter	Description	Value
Summer/winter time change and UTC definition	The time change is carried out automatically according to the Central Europe criteria.	Central Europe*
	The time change is carried out through specific settings according to the criteria in place in the country of installation. There are additional settings that allow configuration for other countries.	Other countries

* Default value

Switch-over for daylight saving time

Parameter	Description	Value
The First winter to summer time change	This setting determines the day of the week on which the time change will take place.	Sunday* Monday Tuesday Wednesday Thursday Friday Saturday Any day

Parameter	Description	Value
After	This setting determines at what time (day, month, hour, minute) the change will take place.	
Day		1... 25* ...31 day
Month		1... 3* ...12 month
Hours		0... 2* ...23 hours
Minutes		0* ...59 minutes

Example: If the time change takes place on the last Sunday of March at 2 am, select:

- First winter to summer time change **Sunday** after **24/03 at 2h 00m**.

Parameter	Description	Value
Summer time offset in minutes	This setting determines the offset value in minutes when the time changes (summer/winter; winter/summer).	60* minutes: 0 to 60 min

Summer/winter time change

Parameter	Description	Value
First summer/winter time change	This setting determines the day of the week on which the time change will take place.	Sunday* Monday Tuesday Wednesday Thursday Friday Saturday Any day

* Default value

Parameter	Description	Value
After	This setting determines at what time (day, month, hour, minute) the change will take place.	
Day		1... 25* ...31 day
Month		1... 3* ...12 month
Hours		0... 2* ...23 hours
Minutes		0* ...59 minutes

Example: If the time change takes place on the last Sunday of October at 3 am, select:

- First winter to summer time change **Sunday** after **24/10 at 3h 00m**.

Parameter	Description	Value
UTC offset in minutes	This setting determines the value of the time difference (in minutes) in relation to Greenwich Mean Time.	60* minutes: -720 to +780 min

3.1.2 Weather data and alarms

- GPS Weather station		
General	Outdoor temperature	Emission of value every 30 minutes
Weather data and alarms		Emission on change: +/- 0,5°C
Shading	Frost alarm	3°C fixed value, emission every 10 minutes
Heat protection, heat recovery	Luminosity	Emission of value every 30 minutes
Information		Emission on change: +/- 20%
	Day/night	Emission day if value > 12 lux during 1 minute
		Emission night if value < 10 lux during 1 minute
	Wind speed	Emission of value every 30 minutes
		Emission on change: +/- 20%
	Wind alarm 1	Emission every 10 minutes if wind speed > 4 m/s
	Wind alarm 2	Emission every 10 minutes if wind speed > 8 m/s
	Wind alarm 3	Emission every 10 minutes if wind speed > 12...
	Rain alarm	Emission every 10 minutes

Note: All of the settings in this tab are set and cannot be modified.

* Default value

3.1.2.1 Temperature measurement

The outdoor temperature is mainly used for the heating, ventilation and air conditioning systems. It can also be used as a display on touch screens.

Parameter	Description	Value
Outdoor temperature	The temperature value is periodically sent every 30 minutes and at each change in temperature if it is greater than +/- 0.5° C from the last measurement.	Emission of value every 30 minutes Emission on change: +/- 0.5 °C
Frost alarm	The frost alarm (1 bit) can be used directly by the ON/OFF output modules. The alarm threshold is set at 3 °C and the alarm will be transmitted every 10 minutes.	3 °C fixed value, emission every 10 minutes

The frost alarm operates as follows:

- The frost alarm is activated (bit = 1) if the value measured is less than the threshold value (3 °C) for 5 minutes. It will immediately be transmitted and every 10 minutes thereafter.
- The frost alarm is deactivated (bit = 0) if the value measured becomes greater than 5° C. It will immediately be transmitted and every 10 minutes thereafter.

Communication objects: **0 - Outdoor temperature - Output** (2 Byte - 9.001 DPT_Value_Temp)
 8 - Frost alarm - Output (1 Bit - 1.005 DPT_Alarm)

3.1.2.2 Luminosity

The outdoor luminosity is mainly used for lighting control systems and shading management, taking the position of the sun into account. It can also be used as a display on touch screens.

Parameter	Description	Value
Luminosity	The luminosity value is periodically sent every 30 minutes and at each change if the variation is greater than 20 % compared to the last measurement.	Emission of value every 30 minutes Emission on change: +/- 20 %
Day/night	The day/night information (1 bit) can be used directly by the ON/OFF output modules. The threshold is fixed at 10 Lux (fixed value), with a hysteresis of 2 Lux (fixed value). The information is sent each time the threshold is exceeded (switching from day to night and night to day).	Emission day if value > 12 lux during 1 minute Emission night if value < 10 lux during 1 minute

The day/night information operates as follows:

- The "Day" information is activated (bit = 0) if the value measured is greater than the threshold value + hysteresis (12 Lux) for more than one minute (fixed value).
- The "Night" information is activated (bit = 1) if the value measured is less than the threshold value (10 Lux) for one minute.

Communication objects: **2 - Luminosity - Output** (2 Byte - 9.004 DPT_Value_Lux)
 3 - Day/night - Output (1 Bit - 1.011 DPT_State)

3.1.2.3 Wind speed

The wind speed value is mainly used to secure shutters and blinds. It can also be used as a display on touch screens.

Parameter	Description	Value
Wind speed	The wind speed value is periodically sent every 30 minutes and at each change if the variation is greater than 20 % compared to the last measurement.	Emission of value every 30 minutes Emission on change: +/- 20 %
Wind alarm 1	wind alarm 1 (1 bit) can be used directly by the shutter/ blind output modules. The alarm threshold is set at 4 m/s (14.4 km/h) and the alarm will be transmitted every 10 minutes.	Emission every 10 minutes if wind speed > 4 m/s
Wind alarm 2	wind alarm 2 (1 bit) can be used directly by the shutter/ blind output modules. The alarm threshold is set at 8 m/s (28.8 km/h) and the alarm will be transmitted every 10 minutes.	Emission every 10 minutes if wind speed > 8 m/s
Wind alarm 3	wind alarm 3 (1 bit) can be used directly by the shutter/ blind output modules. The alarm threshold is set at 12 m/s (43.2 km/h) and the alarm will be transmitted every 10 minutes.	Emission every 10 minutes if wind speed > 12 m/s

A communication object is available for each of the three alarms.

The wind alarm (1 to 3) operates as follows:

- The wind alarm is activated (bit = 1) if the value measured is greater than the threshold value for more than 2 seconds. It will immediately be transmitted and every 10 minutes thereafter.
- The wind alarm is deactivated (bit = 0) if the value measured is less than the threshold value for more than 5 minutes. It will immediately be transmitted and every 10 minutes thereafter.

Communication objects:

- 1 - Wind speed - Output** (2 Byte - 9.005 DPT_Value_Wsp)
- 4 - Wind alarm 1 - Output** (1 Bit - 1.005 DPT_Alarm)
- 5 - Wind alarm 2 - Output** (1 Bit - 1.005 DPT_Alarm)
- 6 - Wind alarm 3 - Output** (1 Bit - 1.005 DPT_Alarm)

3.1.2.4 Rain alarm

The rain alarm mainly controls the opening and closing of canopies or skylights. It can also be used as a display on touch screens.

Parameter	Description	Value
Rain alarm	The rain alarm (1 bit) can be used directly by the shutter/blind output modules.	Emission every 10 minutes

The rain alarm operates as follows:

- The rain alarm is activated (bit = 1) when rain is detected. It will immediately be transmitted and every 10 minutes thereafter.
- The rain alarm is deactivated (bit = 0) after a period of 5 minutes after rain has stopped. It will immediately be transmitted and every 10 minutes thereafter.

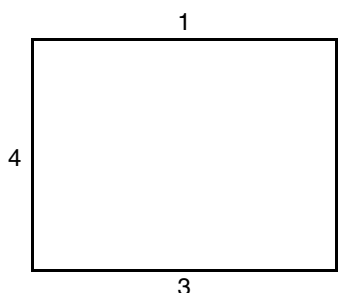
Communication objects: [7 - Rain alarm - Output \(1 Bit - 1.005 DPT_Alarm\)](#)

3.1.3 Shading

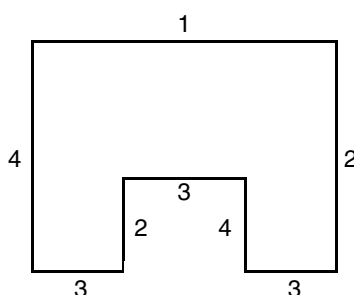
The aim of the shading function is to provide further comfort for people in the room by preventing glare from the sun. To simplify the use and configuration of the weather station, we recommend working with facades that are fitted only with shutters or only with blinds.

The shading control options (blind or louver position and slat tilt positions) are associated with facades.

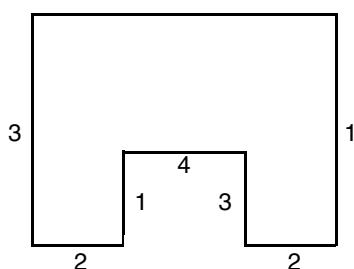
Facade controls



The majority of buildings have 4 facades. Creating a separate command for the sun protection of each facade is recommended.



For U shaped buildings, only 4 facades must be controlled separately, insofar as several are facing the same direction.



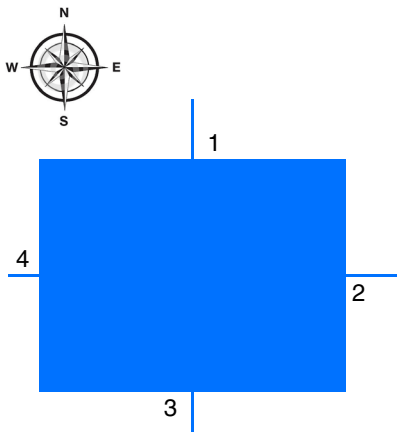
To manage shading on a facade with both blinds and shutters, two facades must be registered: one for blinds and one for shutters. Here, facade 2 is for shutters and facade 4 is for blinds.

Facade direction

The direction of each facade must be defined in the setup for the shading function to operate correctly.

- Defining the direction of each facade used.

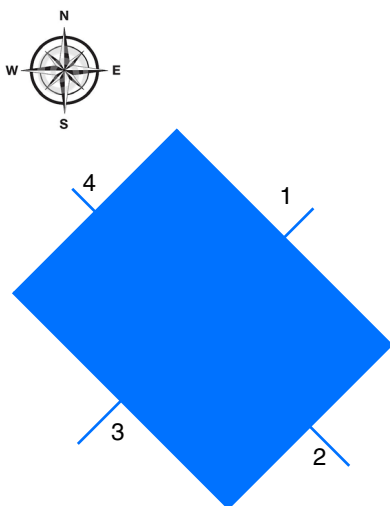
Example 1:



Direction:

- Facade 1: N = 0°
- Facade 2: E = 90°
- Facade 3: S = 180°
- Facade 4: W = 270°

Example 2:



Direction:

- Facade 1: NE = 45°
- Facade 2: SE = 135°
- Facade 3: SW = 225°
- Facade 4: NW = 315°

GPS Weather station	Facade 1	Not active
General	Facade orientation in °	S = 180°
Weather data and alarms		
Shading		
Heat protection, heat recovery	Facade 2	Not active
Information	Facade orientation in °	W = 270°
	Facade 3	Not active
	Facade orientation in °	E = 90°
	Facade 4	Not active
	Facade orientation in °	N = 0°

Parameter	Description	Value
Facade x	<p>The facade is not used for position tracking.</p> <p>The facade is used for position tracking the rolling shutters only.</p> <p>The facade is used for position tracking the blinds (position and tilt).</p>	<p>Not active*</p> <p>Position tracking for shutters</p> <p>Position and slat tracking for blinds</p>
Facade orientation in °	This setting defines the direction of the facade according to the compass points.	<p>N = 0°</p> <p>NE = 45°</p> <p>E = 90°</p> <p>SE = 135°</p> <p>S = 180°</p> <p>SW = 225°</p> <p>W = 270°</p> <p>NW = 315°</p> <p>All = 360°</p>

Note: To manage a glazed roof or partially glazed roof, the roof must be declared as one of the facades with the setting (All = 360°).

Note: This is intended only for blinds with horizontal slats.

* Default value

Shading concept for rolling shutters and slat blinds:

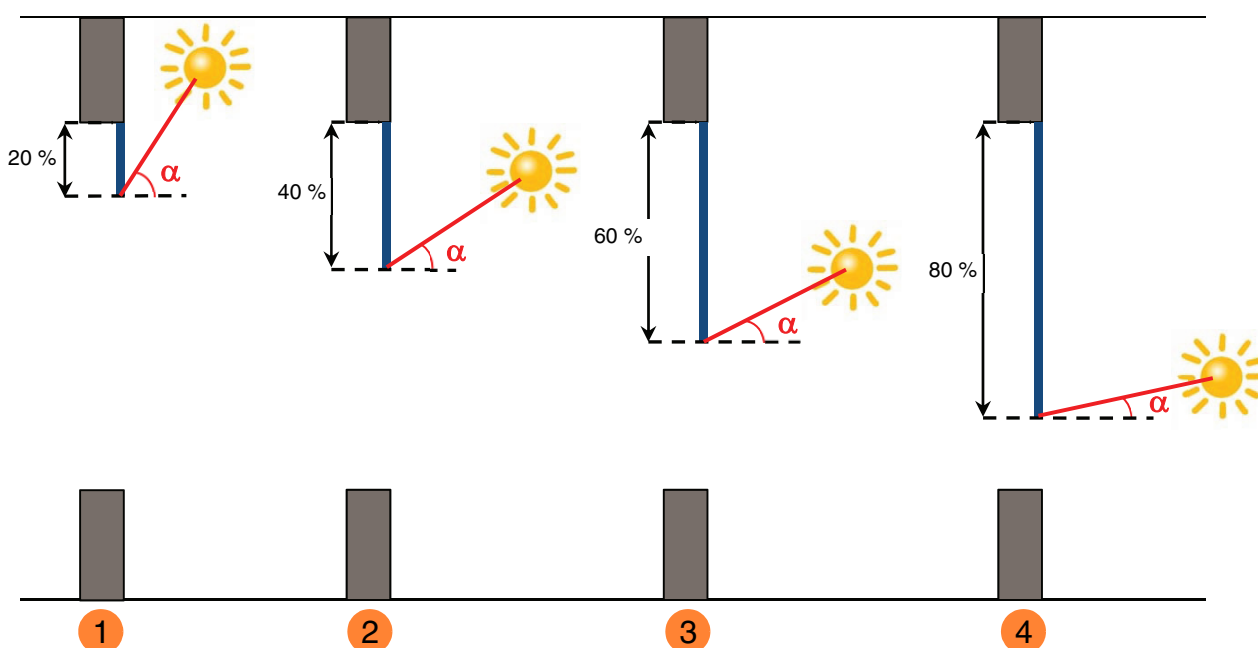
With shading tracking, the sun protection is not fully lowered, thus allowing the sun to penetrate the room. In this way, users at the bottom of the window can see out and plants on the windowsill will receive sunshine.

Note: Shading tracking can only be used when the sun protection is lowered from top to bottom (such as shutters, textile sun protection or blinds with horizontal slats). This function is not usable for a sun protection that is pulled from one side to the other or pulled in front of a window from both sides.

Shading with roller shutters

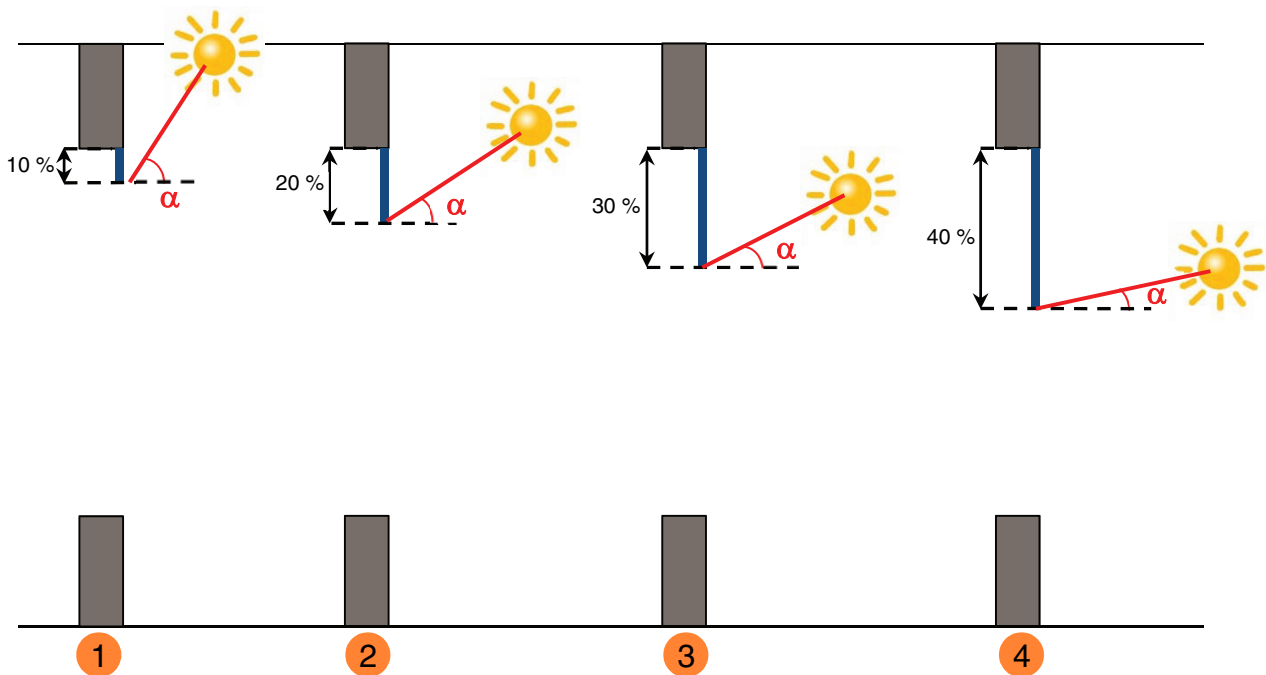
Shading is automatically controlled if the shading conditions on the relevant facade are fulfilled: luminosity threshold > 40 klux and sun on the facade. The shading thus moves in line with the path of the sun. It starts with a minimum shutter closing value of 20 % and a maximum configurable closure between 20 and 80 %. Full automatic closure can only be obtained if the heat protection function is activated.

Example of 80% maximum closure (default value):



Example	Shutter position	Sun position - Angle α between
1	20%	46° ... 90°
2	40%	31° ... 45°
3	60%	16° ... 30°
4	80%	0° ... 15°

Example with maximum closure set at 40%:



Example	Shutter position	Sun position - Angle α between
1	10%	46° ... 90°
2	20%	31° ... 45°
3	30%	16° ... 30°
4	40%	0° ... 15°

Sun protection operation for shutters:

If the luminosity level is sufficient (more than 40 Klux for more than one minute) **and** the sun is shining on the facade:

- The shutter is positioned in line with the path of the sun between 20 % closure and the maximum shading position defined by the configuration (20 to 80 %).

If the luminosity level is insufficient (less than 32 Klux for more than 15 minutes) **or** the sun is not shining on the facade:

- The shutter is positioned at a fixed value of 0 %.

Facade 1 Position tracking for shutters

Facade orientation in ° S = 180°

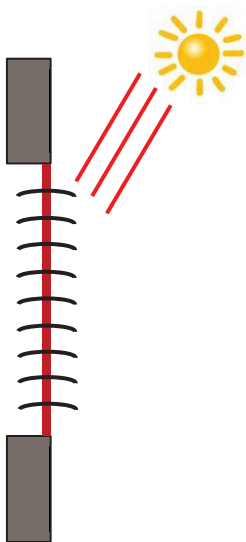
Shading position max. (20 - 80%) 80%

Parameter	Description	Value
Shading position max. (20 - 80 %)	This setting defines the maximum permitted closure for automatic shading control.	20... 80 % *

Shading with slat blinds

During slat adjustment, the horizontal slats of the blinds are not fully closed; rather they are matched to the sun condition and set automatically in such a way that the sun cannot shine directly into the room.

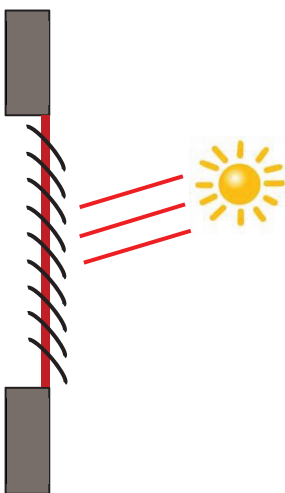
However diffuse daylight can enter the room between the slats and so provide glare-free room lighting. Slat adjustment of an external blind prevents the entry of heat from sunshine into the room and, at the same time, reduces the cost of electricity for room lighting.



Sun protection at high sun elevations

Shading is automatically controlled if the shading conditions on the relevant facade are fulfilled: luminosity threshold > 40 klux and sun on the facade. To limit the number of trips, the shading starts by fully lowering the blinds following the direction of the slats at 50 %. The low position will be maintained as long as the shading function is activated, and adjustments are made simply by orienting the slats depending on the position of the sun. The slats are positioned almost horizontally, so that the sun does not directly penetrate the room.

Position: 100 %
Tilt tracking: 50 %



Sun protection at medium sun elevations

The low position is maintained and the slats are re-closed a little more to prevent sunlight from directly entering the room.

Diffuse daylight, however, can still continue to enter and so provide lighting for the room (daylight use).

Sun protection at low sun elevations

The slats are automatically closed to an extent where the sun cannot shine directly into the room.

Position: 100 %
Tilt tracking: 80 %

* Default value

Shading operation for blinds:

If the luminosity level is sufficient (more than 40 Klux for more than one minute) **and** the sun is shining on the facade:

- The blind is positioned at the fixed value of 100 % (lower position).
- The blind is tilted at a value calculated by the weather station depending on the position of the sun.

If the luminosity level is insufficient (less than 40 klux for more than 10 minutes):

- The blind remains in the 100 % lowered position.
- The blind tilts the slats horizontally (50 % value).

If at the end of 30 minutes, the luminosity level is still insufficient (less than 40 Klux for more than 10 minutes) **or** the sun is not shining on the facade:

- The blind is positioned at the fixed value of 0 %.
- The blind tilts the slats at a fixed value of 0 %.

Facade 1	Position and slat tracking for blinds
Facade orientation in °	S = 180°
Driving position for shading with slats	Position down 100%

Parameter	Description	Value
Driving position for shading with slats	This setting indicates that the blinds remain in the lowered position while the shading function is activated. This limits positioning movements, so shading is carried out only by orienting the slats. The value of this setting is fixed.	Position down 100 %*

The **facade x shading deactivation** object disables the shading for each facade. The deactivation control can be in the form of a supervision system or push button.

The deactivation control operates as follows:

- If the **facade x shading deactivation** object receives the value 0, sun protection of the relevant facade is authorised.
- If the **facade x shading deactivation** object receives the value 1, sun protection of the relevant facade is not authorised.

The **facade x shading deactivation status** object transmits the **facade x shading deactivation** object status.

Communication objects (Facade 1):

- [17 - Sun protection facade 1 position % - Output \(1 Byte - 5.001 DPT_Scaling\)](#)
- [18 - Sun protection facade 1 slat angle % - Output \(1 Byte - 5.001 DPT_Scaling\)](#)
- [19 - Shading facade 1 deactivation - Input \(1 Bit - 1.003 DPT_Enable\)](#)
- [20 - Shading deactivation status facade 1 - Output \(1 Bit - 1.003 DPT_Enable\)](#)

Communication objects (Facade 2):

- [21 - Sun protection facade 2 position % - Output \(1 Byte - 5.001 DPT_Scaling\)](#)
- [22 - Sun protection facade 2 slat angle % - Output \(1 Byte - 5.001 DPT_Scaling\)](#)
- [23 - Shading facade 2 deactivation - Input \(1 Bit - 1.003 DPT_Enable\)](#)
- [24 - Shading deactivation status facade 2 - Output \(1 Bit - 1.003 DPT_Enable\)](#)

* Default value

Communication objects (Facade 3):

- 25 - Sun protection facade 3 position % - Output (1 Byte - 5.001 DPT_Scaling)
- 26 - Sun protection facade 3 slat angle % - Output (1 Byte - 5.001 DPT_Scaling)
- 27 - Shading facade 3 deactivation - Input (1 Bit - 1.003 DPT_Enable)
- 28 - Shading deactivation status facade 3 - Output (1 Bit - 1.003 DPT_Enable)

Communication objects (Facade 4):

- 29 - Sun protection facade 4 position % - Output (1 Byte - 5.001 DPT_Scaling)
- 30 - Sun protection facade 4 slat angle % - Output (1 Byte - 5.001 DPT_Scaling)
- 31 - Shading facade 4 deactivation - Input (1 Bit - 1.003 DPT_Enable)
- 32 - Shading deactivation status facade 4 - Output (1 Bit - 1.003 DPT_Enable)

Value fixed by facade:

Parameter	Value
Luminosity threshold	40 Klux
Hysteresis of the luminosity threshold	- 8 Klux
Tilting in % after a slat control of 50 %	50 % (90°)
Tilting in % after a slat control of 100 %	100 % (180°)

3.1.4 Heat protection, heat recovery

This function manages the indoor temperature according to sunlight and season. In summer, the heat protection allows for the blinds to be positioned so as to limit warming of the room.

In winter, heat recovery allows for the blinds to be positioned so as to reheat the room using sunlight, thus benefiting from a free heat source.

These two functions result in the full opening or closing of shutters or blinds. Using these functions is recommended when rooms are empty.

The screenshot shows a configuration page for a 'GPS Weather station' object. The left sidebar contains a menu with 'Heat protection, heat recov...' selected. The main content area has a title: 'The object heat protection/heat recovery deactivation allows or denies heat protection or heat recovery for all facades'. Below this, there are two sections:

- Heat protection:**
 - 'Use of heat protection automatic control' is set to Yes.
 - 'Heat protection conditions' are defined by three dropdown menus:
 - Sun on the facade
 - + Luminosity > 40 klux
 - + Outdoor >33°C or (only facade 1) indoor >2...
- Heat recovery:**
 - 'Use of heat recovery automatic control' is set to Yes.
 - 'Heat recovery conditions' are defined by three dropdown menus:
 - Sun on the facade
 - + Luminosity > 40 klux
 - + Outdoor < 12°C and (only facade1) indoor <...

Heat protection

Heat protection is used to prevent the room from overheating and to limit the use of the air conditioning system.

It depends on:

- the luminosity on the facade (more than 40 klux)
- the position of the sun on the facade
- the outdoor temperature on all of the facades
- or the indoor temperature on the facade 1

Heat protection operation:

If the luminosity level is sufficient (more than 40 Klux for more than one minute) **and** the sun is shining on the facade **and** the outdoor temperature is greater than 33 °C **or** the indoor temperature is greater than 28°C on the facade 1:

- The heat protection is activated. The shutters and blinds close completely. This function is prioritized on the shading control.

If the luminosity level is insufficient (less than 40 Klux for more than 10 minutes) **or** the sun is not shining on the facade **or** the outdoor temperature is less than 28 °C **and** the indoor temperature is less than 25°C for facade 1 for more than 15 minutes:

- The heat protection is deactivated. The shutters and blinds remain in position.

Parameter	Description	Value
Use of heat protection automatic control	The heat protection automatic control is: Not active Active	No* Yes

Parameter	Description	Value
Heat protection conditions	This setting defines the conditions so that the heat protection is activated. The value of this setting is fixed.	Sun on the facade Luminosity > 40 klux Outdoor > 33 °C or (only facade 1) indoor > 28 °C*

Heat recovery

To save energy, the heat recovery system contributes to heating up the room by using the sun's energy.

It depends on:

- the luminosity on the facade
- the position of the sun on the facade
- the outdoor temperature on all of the facades
- or the indoor temperature on the facade 1

* Default value

Heat recovery operation:

If the luminosity level is sufficient (more than 40 Klux for more than one minute) **and** the sun is shining on the facade **and** the outdoor temperature is less than 12 °C **and** the indoor temperature is less than 22 °C for facade 1:

- Heat recovery is activated. The shutters and blinds open completely. **Warning:** This function should not be used for openings that are part of the anti-intrusion system.

If the luminosity level is insufficient (less than 40 Klux for more than 10 minutes) **or** the sun is not shining on the facade **or** the outdoor temperature is greater than 28 °C **or** the indoor temperature is greater than 25 °C for facade 1:

- Heat recovery is disabled. The shutters and blinds close completely.

Parameter	Description	Value
Use of heat recovery automatic control	Automatic control of heat recovery is: Not active Active	No* Yes

Parameter	Description	Value
Heat recovery conditions	This parameter defines the conditions for heat recovery to be activated. The value of this setting is fixed.	Sun on the facade Luminosity > 40 klux Outdoor < 12 °C or (facade 1) indoor < 22 °C*

The **Heat recovery/protection deactivation** object allows for the heat recovery or protection to be disabled for the 4 facades. The deactivation control can be in the form of a supervision system or push button. This object is common to the 4 facades.

If the use of heat recovery or protection is confirmed in the settings, then the deactivation control operates as follows:

- If the **heat recovery/protection deactivation** object receives the value 0, the heat recovery or protection is disabled.
- If the **heat recovery/protection deactivation** object receives the value 1, the heat recovery or protection is activated.

The **heat recovery/protection deactivation status** object transmits the **heat recovery/protection deactivation** object status.

The **heat recovery/protection status** object indicates:

- whether the heat protection function is active (example: very sunny day in summer).
- whether the heat recovery function is active (example: very sunny day in winter).
- whether one of the 2 functions is inactive (bit = 0).

Communication objects:

33 - Heat protection/recovery deactivation - Input (1 Bit - 1.003 DPT_Enable)

34 - Heat protection/recovery deactivation status - Output (1 Bit - 1.003 DPT_Enable)

35 - Heat protection/recovery status - Output (1 Bit - 1.011 DPT_State)

36 - Indoor temperature for facade 1 - Input (2 Byte - 9.001 DPT_Value_Temp)

* Default value

3.2 Communication objects

	Number	Name	Function of the object	Length	C	R	W	T
	0	Outdoor temperature	Output	2 byte	C	R	-	T
	1	Wind speed	Output	2 byte	C	R	-	T
	2	Luminosity	Output	2 byte	C	R	-	T
	3	Day/night	Output	1 bit	C	R	-	T
	4	Wind alarm 1	Output	1 bit	C	R	-	T
	5	Wind alarm 2	Output	1 bit	C	R	-	T
	6	Wind alarm 3	Output	1 bit	C	R	-	T
	7	Rain alarm	Output	1 bit	C	R	-	T
	8	Frost alarm	Output	1 bit	C	R	-	T
	9	Date slave	Input	3 byte	C	-	W	-
	10	Time slave	Input	3 byte	C	-	W	-
	11	Date and time slave	Input	8 byte	C	-	W	T
	12	Date and time request	Input	1 bit	C	-	W	-
	13	Date master	Output	3 byte	C	R	-	T
	14	Time master	Output	3 byte	C	R	-	T
	15	Date and time master	Output	8 byte	C	R	-	T
	16	Date and time request	Output	1 bit	C	-	-	T
	17	Sun protection facade 1 position %	Output	1 byte	C	R	-	T
	18	Sun protection facade 1 slat angle %	Output	1 byte	C	R	-	T
	19	Shading facade 1 deactivation	Input	1 bit	C	-	W	-
	20	Shading deactivation status facade 1	Output	1 bit	C	R	-	T
	21	Sun protection facade 2 position %	Output	1 byte	C	R	-	T
	22	Sun protection facade 2 slat angle %	Output	1 byte	C	R	-	T
	23	Shading facade 2 deactivation	Output	1 bit	C	-	W	-
	24	Shading deactivation status facade 2	Output	1 bit	C	R	-	T
	25	Sun protection facade 3 position %	Output	1 byte	C	R	-	T
	26	Sun protection facade 3 slat angle %	Output	1 byte	C	R	-	T
	27	Shading facade 3 deactivation	Input	1 bit	C	-	W	-
	28	Shading deactivation status facade 3	Output	1 bit	C	R	-	T
	29	Sun protection facade 4 position %	Output	1 byte	C	R	-	T
	30	Sun protection facade 4 slat angle %	Output	1 byte	C	R	-	T
	31	Shading facade 4 deactivation	Input	1 bit	C	-	W	-
	32	Shading deactivation status facade 4	Output	1 bit	C	R	-	T
	33	Heat protection/recovery deactivation	Input	1 bit	C	-	W	-
	34	Heat protection/recovery deactivation status	Output	1 bit	C	R	-	T
	35	Heat protection/recovery status	Output	1 bit	C	R	-	T
	36	Indoor temperature for facade 1	Input	2 byte	C	-	W	-

3.2.1 Weather data and alarms

No.	Name	Function of the object	Data type	Flags
0	Outdoor temperature	Output	2 Byte - 9.001 DPT_Value_Temp	C, R, T
<p>These objects are always activated.</p> <p>This object transmits the outdoor temperature from the weather station on the KNX bus.</p> <p>The temperature value is periodically sent every 30 minutes and at each change in temperature if it is greater than +/- 0.5 °C from the last measurement.</p> <p>Temperature measurement range: -30 to +80 °C Resolution: 0.1 °C</p> <p>For further information, see: Temperature measurement.</p>				

No.	Name	Function of the object	Data type	Flags
1	Wind speed	Output	2 Byte - 9.005 DPT_Value_Wsp	C, R, T
<p>These objects are always activated.</p> <p>This object sends the wind speed from the weather station on the KNX bus.</p> <p>The wind speed value is periodically sent every 30 minutes and at each change if the variation is greater than 20 % compared to the last measurement.</p> <p>Wind measurement range: 0 to 35 m/s Resolution: 0.1 m/s</p> <p>For further information, see: Wind speed.</p>				

No.	Name	Function of the object	Data type	Flags
2	Luminosity	Output	2 Byte - 9.004 DPT_Value_Lux	C, R, T
<p>These objects are always activated.</p> <p>This object sends the luminosity from the weather station on the KNX bus.</p> <p>The luminosity value is periodically sent every 30 minutes and at each change if the variation is greater than 20 % compared to the last measurement.</p> <p>Luminosity measurement range: 0 to 150 000 lux Resolution: 1 lux for 0 to 120 lux 2 lux for 121 to 1 046 lux 63 lux for 1 047 to 52 363 lux 423 lux for 52 364 to 150 000 lux</p> <p>For further information, see: Luminosity.</p>				

No.	Name	Function of the object	Data type	Flags
3	Day/night	Output	1 Bit - 1.011 DPT_State	C, R, T

These objects are always activated.
 This object sends the "day/night" information from the weather station on the KNX bus.

- The "Day" information is activated (bit = 0) if the value measured is greater than the threshold value + hysteresis (12 Lux) for more than one minute (fixed value).
- The "Night" information is activated (bit = 1) if the value measured is less than the threshold value (10 Lux) for one minute.

The information is sent 2 times every 24 hours (switching from day to night and night to day).

For further information, see: [Luminosity](#).

No.	Name	Function of the object	Data type	Flags
4	Wind alarm 1	Output	1 Bit - 1.005 DPT_Alarm	C, R, T
5	Wind alarm 2	Output	1 Bit - 1.005 DPT_Alarm	C, R, T
6	Wind alarm 3	Output	1 Bit - 1.005 DPT_Alarm	C, R, T

These objects are always activated.
 This object sends the alarm command from the weather station on the KNX bus.

- The wind alarm is activated (bit = 1) if the value measured is greater than the threshold value for more than 2 seconds. It will immediately be transmitted and every 10 minutes thereafter.
- The wind alarm is deactivated (bit = 0) if the value measured is less than the threshold value for more than 5 minutes. It will immediately be transmitted and every 10 minutes thereafter.

Wind alarm 1: The alarm threshold is fixed at 4 m/s.
 Wind alarm 2: The alarm threshold is fixed at 8 m/s.
 Wind alarm 3: The alarm threshold is fixed at 12 m/s.

For further information, see: [Wind speed](#).

No.	Name	Function of the object	Data type	Flags
7	Rain alarm	Output	1 Bit - 1.005 DPT_Alarm	C, R, T

These objects are always activated.
 This object sends the alarm command from the weather station on the KNX bus.

- The rain alarm is activated (bit = 1) when rain is detected. It will immediately be transmitted and every 10 minutes thereafter.
- The rain alarm is deactivated (bit = 0) after a period of 5 minutes after rain has stopped. It will immediately be transmitted and every 10 minutes thereafter.

For further information, see: [Rain alarm](#).

No.	Name	Function of the object	Data type	Flags
8	Frost alarm	Output	1 Bit - 1.005 DPT_Alarm	C, R, T

These objects are always activated.
 This object sends the alarm command from the weather station on the KNX bus.

- The frost alarm is activated (bit = 1) if the value measured is less than the threshold value (3 °C) for 5 minutes. It will immediately be transmitted and every 10 minutes thereafter.
- The frost alarm is disabled (bit = 0) if the value measured is greater than 5 °C. It will immediately be transmitted and every 10 minutes thereafter.

For further information, see: [Temperature measurement](#).

3.2.2 Overall parameters

No.	Name	Function of the object	Data type	Flags
9	Date slave	Input	3 Byte - 11.001 DPT_Date	C, W

This object is activated when the **Date and time** setting has the value **Slave**.
This object receives the reference date of an external device.

Object value:

Byte 3 (MSB)					Byte 2					Byte 1 (LSB)													
Day					Month					Year													
0	0	0	D	D	D	D	D	0	0	0	0	M	M	M	M	0	Y	Y	Y	Y	Y	Y	Y

Fields	Code	Value	Units
Day	Binary	1 to 31 (5 bit)	Day
Month	Binary	1 to 12 (4 bit)	Month
Year	Binary	0 to 99 (7 bit)	Year

For further information, see: [Date and time](#).

No.	Name	Function of the object	Data type	Flags
10	Time slave	Input	3 Byte - 10.001 DPT_TimeOfDay	C, W

This object is activated when the **Date and time** setting has the value **Slave**.
This object receives the reference time of an external device.

Object value:

Byte 3 (MSB)					Byte 2					Byte 1 (LSB)													
Day			Hours		Minutes					Seconds													
D	D	D	T	T	T	T	T	0	0	M	M	M	M	M	M	0	0	W	W	W	W	W	W

Fields	Code	Value	Units
Day	Binary	0 = any day 1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds

For further information, see: [Date and time](#).

No.	Name	Function of the object	Data type	Flags
11	Date and time slave	Input	8 Byte - 19.001 DPT_Date_Time	C, W

This object is activated when the **Date and time** setting has the value **Slave**.

This object receives the reference date and time of an external device.

Object value:

Byte 8 (MSB)								Byte 7								Byte 6								Byte 5							
Year								Month								Day of the month								Weekday				Hours			
Y	Y	Y	Y	Y	Y	Y	Y	0	0	0	0	M	M	M	M	0	0	0	D	D	D	D	D	D	D	D	T	T	T	T	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Byte 4								Byte 3								Byte 2								Byte 1 (LSB)								
Minutes								Seconds								D	DW	DWV	YV	DV	WDV	TV	SWP	CA								
0	0	M	M	M	M	M	M	0	0	W	W	W	W	W	W	B	B	B	B	B	B	B	B	B	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Fields	Code	Value	Units
Year	Binary	0 (1900) to 255 (2155) (8 bit)	Year
Month	Binary	1 to 12 (4 bit)	Month
Day of the month	Binary	1 to 31 (5 bit)	Day
Day of the week	Binary	0 = any day 1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds
Error (D)	Binary	0 = no error or 1 = error (1 bit)	
Day Worked (DW)	Binary	0 = day worked or 1 = holiday (1 bit)	
DWV (DWV)	Binary	0 = day worked valid or 1 = invalid dw (1 bit)	
Year Validated (YV)	Binary	0 = year valid or 1 = invalid year(1 bit)	
DV (DV)	Binary	0 = date valid or 1 = invalid date (1 bit)	
Weekday validated (WDV)	Binary	0 = day valid or 1 = invalid day (1 bit)	
Time Validated (TV)	Binary	0 = time valid or 1 = invalid time (1 bit)	
Summer/Winter Period (SWP)	Binary	0 = standard time or 1 = summertime (1 bit)	
Clock Accuracy (CA)	Binary	0 = no external synchronisation or 1 =external synchronisation (1 bit)	

For further information, see: [Date and time](#).

No.	Name	Function of the object	Data type	Flags
12	Date and time request	Input	1 Bit - 1.017 DPT_Trigger	C, W
<p>This object is activated when the Date and time setting has the value Master. This object receives a date and time request from an external device.</p> <p>Object value:</p> <ul style="list-style-type: none"> - If the object receives the value 1, the date and time is sent from the weather station on the KNX bus. <p>For further information, see: Date and time.</p>				

No.	Name	Function of the object	Data type	Flags																																																																							
13	Date master	Output	3 Byte - 11.001 DPT_Date	C, R, T																																																																							
<p>This object is activated when the Date and time setting has the value Master or Slave. This object sends the reference date from the weather station on the KNX bus.</p> <p>Object value:</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th colspan="5">Byte 3 (MSB)</th> <th colspan="5">Byte 2</th> <th colspan="5">Byte 1 (LSB)</th> </tr> <tr> <th colspan="5">Day</th> <th colspan="5">Month</th> <th colspan="5">Year</th> </tr> </thead> <tbody> <tr> <td>0</td><td>0</td><td>0</td><td>D</td><td>D</td> <td>D</td><td>D</td><td>D</td><td>0</td><td>0</td> <td>0</td><td>0</td><td>M</td><td>M</td><td>M</td><td>M</td> <td>0</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td> <td>Y</td><td>Y</td><td>Y</td><td>Y</td> </tr> </tbody> </table> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Fields</th> <th>Code</th> <th>Value</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>Day</td> <td>Binary</td> <td>1 to 31 (5 bit)</td> <td>Day</td> </tr> <tr> <td>Month</td> <td>Binary</td> <td>1 to 12 (4 bit)</td> <td>Month</td> </tr> <tr> <td>Year</td> <td>Binary</td> <td>0 to 99 (7 bit)</td> <td>Year</td> </tr> </tbody> </table> <p>For further information, see: Date and time.</p>					Byte 3 (MSB)					Byte 2					Byte 1 (LSB)					Day					Month					Year					0	0	0	D	D	D	D	D	0	0	0	0	M	M	M	M	0	Y	Y	Y	Y	Y	Y	Y	Y	Fields	Code	Value	Units	Day	Binary	1 to 31 (5 bit)	Day	Month	Binary	1 to 12 (4 bit)	Month	Year	Binary	0 to 99 (7 bit)	Year
Byte 3 (MSB)					Byte 2					Byte 1 (LSB)																																																																	
Day					Month					Year																																																																	
0	0	0	D	D	D	D	D	0	0	0	0	M	M	M	M	0	Y	Y	Y	Y	Y	Y	Y	Y																																																			
Fields	Code	Value	Units																																																																								
Day	Binary	1 to 31 (5 bit)	Day																																																																								
Month	Binary	1 to 12 (4 bit)	Month																																																																								
Year	Binary	0 to 99 (7 bit)	Year																																																																								

No.	Name	Function of the object	Data type	Flags
14	Time master	Output	3 Byte - 10.001 DPT_TimeOfDay	C, R, T

This object is activated when the **Date and time** setting has the value **Master** or **Slave**.
 This object sends the reference time from the weather station on the KNX bus.

Object value:

Byte 3 (MSB)							Byte 2						Byte 1 (LSB)											
Day			Hours						Minutes								Seconds							
D	D	D	T	T	T	T	T	0	0	M	M	M	M	M	M	M	0	0	W	W	W	W	W	W

Fields	Code	Value	Units
Day	Binary	0 = any day 1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds

For further information, see: [Date and time](#).

No.	Name	Function of the object	Data type	Flags
15	Date and time master	Output	8 Byte - 19.001 DPT_Date_Time	C, R, T

This object is activated when the **Date and time** setting has the value **Master** or **Slave**.
 This object sends the reference date and time from the weather station on the KNX bus.

Object value:

Byte 8 (MSB)								Byte 7								Byte 6								Byte 5							
Year								Month								Day of the month								Weekday				Hours			
Y	Y	Y	Y	Y	Y	Y	Y	0	0	0	0	M	M	M	M	0	0	0	D	D	D	D	D	D	D	D	T	T	T	T	

Byte 4								Byte 3								Byte 2								Byte 1 (LSB)								
Minutes								Seconds								D	DW	DW V	YV	DV	WD V	TV	SWP	CA								
0	0	M	M	M	M	M	M	0	0	W	W	W	W	W	W	B	B	B	B	B	B	B	B	B	0	0	0	0	0	0	0	

Fields	Code	Value	Units
Year	Binary	0 (1900) to 255 (2155) (8 bit)	Year
Month	Binary	1 to 12 (4 bit)	Month
Day of the month	Binary	1 to 31 (5 bit)	Day
Day of the week	Binary	0 = any day 1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bit)	Hours
Minutes	Binary	0 to 59 (6 bit)	Minutes
Seconds	Binary	0 to 59 (6 bit)	Seconds
Error (D)	Binary	0 = no error or 1 = error (1 bit)	
Day Worked (DW)	Binary	0 = day worked or 1 = holiday (1 bit)	
DWV (DWV)	Binary	0 = day worked valid or 1 = invalid dw (1 bit)	
Year Validated (YV)	Binary	0 = year valid or 1 = invalid year(1 bit)	
DV (DV)	Binary	0 = date valid or 1 = invalid date (1 bit)	
Weekday validated (WDV)	Binary	0 = day valid or 1 = invalid day (1 bit)	
Time Validated (TV)	Binary	0 = time valid or 1 = invalid time (1 bit)	
Summer/Winter Period (SWP)	Binary	0 = standard time or 1 = summertime (1 bit)	
Clock Accuracy (CA)	Binary	0 = no external synchronisation or 1 =external synchronisation (1 bit)	

For further information, see: [Date and time](#).

No.	Name	Function of the object	Data type	Flags
16	Date and time request	Output	1 Bit - 1.017 DPT_Trigger	C, T
<p>This object is activated when the Date and time setting has the value Slave. This object sends a reference date and time request from the weather station on the KNX bus.</p> <p>Object value:</p> <ul style="list-style-type: none"> - If a date and time request is received, a telegram with the logical value 1 is sent. <p>For further information, see: Date and time.</p>				

3.2.3 Shading

No.	Name	Function of the object	Data type	Flags
17	Sun protection facade 1 position %	Output	1 Byte - 5.001 DPT_Scaling	C, R, T
<p>This object is activated when the Facade 1 setting has the value Position tracking for shutters or Position and slat tracking for blinds. It is used for positioning the shutter or blind at the desired height, in response to the value sent on the KNX bus.</p> <p>Object value: 0 to 255</p> <ul style="list-style-type: none"> - 0 (0 %): upper position. - 255 (100 %): lower position. <p>This object is sent when there is a status change. For further information, see: Shading.</p>				

No.	Name	Function of the object	Data type	Flags
18	Sun protection facade 1 slat angle %	Output	1 Byte - 5.001 DPT_Scaling	C, R, T
<p>This object is activated when the Facade 1 setting has the value Position and slat tracking for blinds. It is used to position the shutter or blind in response to the value that is sent on the KNX bus.</p> <p>Object value: 0 to 255</p> <ul style="list-style-type: none"> - 0 (0 %): slats open. - 255 (100 %): slats closed. <p>This object is sent when there is a status change. For further information, see: Shading.</p>				

No.	Name	Function of the object	Data type	Flags
19	Shading facade 1 deactivation	Input	1 Bit - 1.003 DPT_Enable	C, W
<p>This object is activated when the Facade 1 setting has the value Position tracking for shutters or Position and slat tracking for blinds.</p> <p>It disables the shading for facade 1. The deactivation control can be in the form of a supervision system or push button.</p> <p>Object value:</p> <ul style="list-style-type: none"> - If the facade 1 shading deactivation object receives the value 0, sun protection of the relevant facade is authorised. - If the facade 1 shading deactivation object receives the value 1, sun protection of the relevant facade is not authorised. <p>For further information, see: Shading.</p>				

No.	Name	Function of the object	Data type	Flags
20	Shading deactivation status facade 1	Output	1 Bit - 1.003 DPT_Enable	C, R, T
<p>This object is activated when the Facade 1 setting has the value Position tracking for shutters or Position and slat tracking for blinds.</p> <p>The facade 1 shading deactivation status object transmits the facade 1 shading deactivation object status.</p> <p>Object value:</p> <ul style="list-style-type: none"> - If shading deactivation is authorized for facade 1, a telegram with logical value 1 is sent. - If shading deactivation is not authorized for facade 1, a telegram with logical value 0 is sent. <p>For further information, see: Shading.</p>				

No.	Name	Function of the object	Data type	Flags
21	Sun protection facade 2 position %	Output	1 Byte - 5.001 DPT_Scaling	C, R, T
See object No. 17				

No.	Name	Function of the object	Data type	Flags
22	Sun protection facade 2 slat angle %	Output	1 Byte - 5.001 DPT_Scaling	C, R, T
See object No. 18				

No.	Name	Function of the object	Data type	Flags
23	Shading facade 2 deactivation	Input	1 Bit - 1.003 DPT_Enable	C, W
See object No. 19				

No.	Name	Function of the object	Data type	Flags
24	Shading deactivation status facade 2	Output	1 Bit - 1.003 DPT_Enable	C, R, T
See object No. 20				

No.	Name	Function of the object	Data type	Flags
25	Sun protection facade 3 position %	Output	1 Byte - 5.001 DPT_Scaling	C, R, T
See object No. 17				

No.	Name	Function of the object	Data type	Flags
26	Sun protection facade 3 slat angle %	Output	1 Byte - 5.001 DPT_Scaling	C, R, T
See object No. 18				

No.	Name	Function of the object	Data type	Flags
27	Shading facade 3 deactivation	Input	1 Bit - 1.003 DPT_Enable	C, W
See object No. 19				

No.	Name	Function of the object	Data type	Flags
28	Shading deactivation status facade 3	Output	1 Bit - 1.003 DPT_Enable	C, R, T
See object No. 20				

No.	Name	Function of the object	Data type	Flags
29	Sun protection facade 4 position %	Output	1 Byte - 5.001 DPT_Scaling	C, R, T
See object No. 17				

No.	Name	Function of the object	Data type	Flags
30	Sun protection facade 4 slat angle %	Output	1 Byte - 5.001 DPT_Scaling	C, R, T
See object No. 18				

No.	Name	Function of the object	Data type	Flags
31	Shading facade 4 deactivation	Input	1 Bit - 1.003 DPT_Enable	C, W
See object No. 19				

No.	Name	Function of the object	Data type	Flags
32	Shading deactivation status facade 4	Output	1 Bit - 1.003 DPT_Enable	C, R, T
See object No. 20				

3.2.4 Automatic control

No.	Name	Function of the object	Data type	Flags
33	Heat protection/recovery deactivation	Input	1 Bit - 1.003 DPT_Enable	C, W

This object is activated when the **Use of heat protection automatic control** or **Use of heat recovery automatic control** setting is activated.
It disables the heat recovery or protection for the 4 facades. The deactivation control can be in the form of a supervision system or push button.

Object value:

- If the **heat recovery/protection deactivation** object receives the value 0, the heat recovery or protection is disabled.
- If the **heat recovery/protection deactivation** object receives the value 1, the heat recovery or protection is activated.

For further information, see: [Heat protection](#), [heat recovery](#).

No.	Name	Function of the object	Data type	Flags
34	Heat protection/recovery deactivation status	Output	1 Bit - 1.003 DPT_Enable	C, R, T

This object is activated when the **Use of heat protection automatic control** or **Use of heat recovery automatic control** setting is activated.

The **heat recovery/protection deactivation status** object transmits the **heat recovery/protection deactivation** object status.

Object value:

- If the heat recovery/protection function is activated, a telegram with logical value 1 is sent.
- If the heat recovery/protection function is disabled, a telegram with logical value 0 is sent.

For further information, see: [Heat protection](#), [heat recovery](#).

No.	Name	Function of the object	Data type	Flags
35	Heat protection/recovery status	Output	1 Bit - 1.011 DPT_State	C, R, T

This object is activated when the **Use of heat protection automatic control** or **Use of heat recovery automatic control** setting is activated.

The operating status is defined, given the automatic triggering of the function according to the position of the sun and the temperature.

Object value:

- If the heat recovery or protection function is activated, a telegram with logical value 1 is sent.
- If the heat recovery or protection function is disabled, a telegram with logical value 0 is sent.

For further information, see: [Heat protection](#), [heat recovery](#).

No.	Name	Function of the object	Data type	Flags
36	Indoor temperature for facade 1	Input	2 Byte - 9.001 DPT_Value_Temp	C, W
<p>This object is activated when the Use of heat protection automatic control or Use of heat recovery automatic control setting is activated.</p> <p>It receives the indoor temperature, which is transmitted by a thermostat in the room.</p> <p>Object value: -30 °C to +80 °C</p> <p>For further information, see: Heat protection, heat recovery.</p>				

4. Programming by Easy Tool

4.1 Product overview

TXE530: Weather station

Product view:

View of channels:

1 Input	
	TXE530 - 1 - 1 Housing

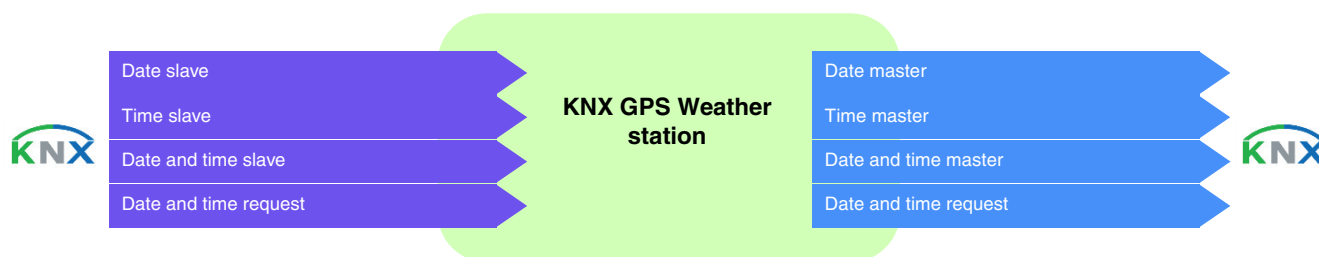
1 Output	
	TXE530 - 1 - 1 Housing - Shutter

Product settings:

Setting	Value
Orientation facade 1	N - 0°
Shading control facade 1	Not used
Shading max position facade 1	80
Orientation facade 2	E - 90°
Shading control facade 2	Not used
Shading max position facade 2	80
Orientation facade 3	S - 180°
Shading control facade 3	Not used
Shading max position facade 3	80
Orientation facade 4	O - 270°
Shading control facade 4	Not used
Shading max position facade 4	80
Heat Protection	Disable
Heat Recovery	Disable

4.2 Date and time

The GPS module built into the device is able to send the date and time to the bus. When the weather station is set without restrictions, data is sent every 12 hours (fixed value) and during the time changes between summer and winter.



Date and time for Master

The device uses the time data from another device on the bus.

In the first instance, the current date and time can be set via the ETS. The weather station works with this data until a valid GPS signal is received for the first time.

Date and time for Slave

The device receives the time data through GPS and sends it to the KNX bus every 12 hours.

In slave mode, the weather station synchronizes itself to the date and time of the master system. However, it always operates with its own date and time when calculating the azimuth and elevation.

When the weather station does not receive the date and time information after 2 successive tries (fixed value), it will send a request. If there is no response, the weather station switches automatically to master mode. When the master device re-sends the date and time, the weather station returns to slave mode.

Date and time in Autonomous mode

The device receives the time data through the GPS and does not send it to the KNX bus.

The weather station operates with its own date and time to calculate the azimuth and elevation. No item is sent to or read on the KNX bus.

The time change is carried out automatically according to the Central Europe criteria.

■ Links

For this function, the link is made automatically if compatible products are present in the installation.

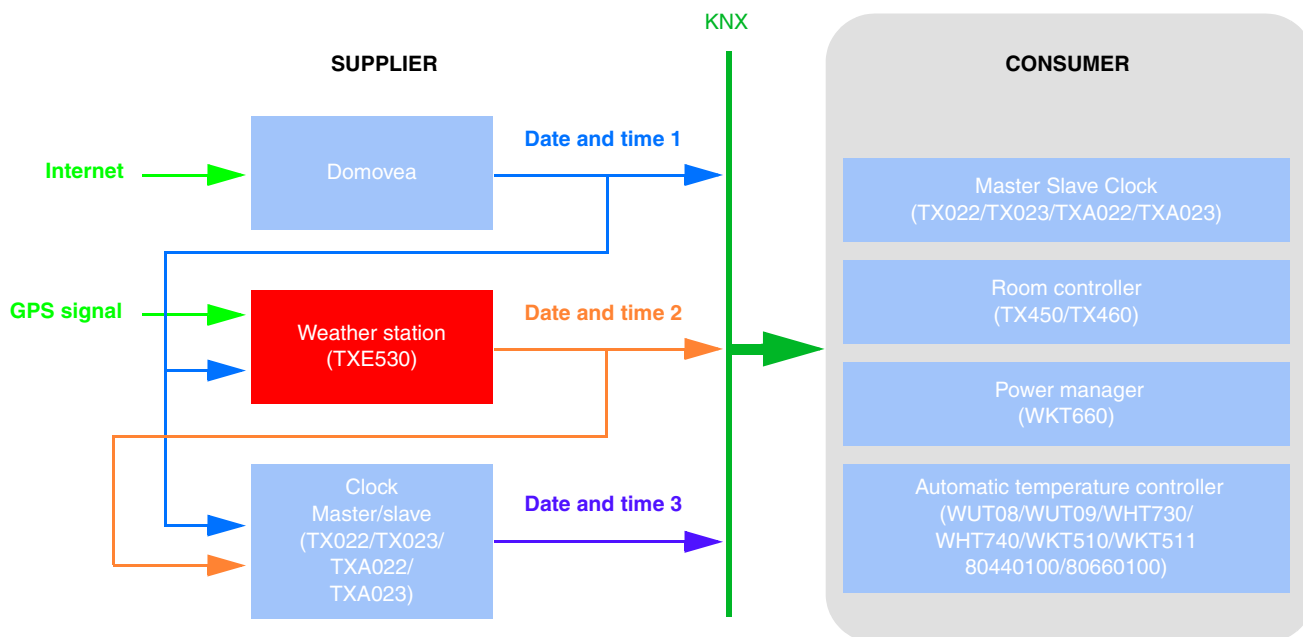
This automatic link is used for several products. They are composed of several objects:

- date and time
- hour
- date

The information from these objects may come from 3 different sources, each with its own priority:

- The domovea system (priority 1 - the highest)
- The weather station (priority 2 - medium)
- A clock (priority 3 - the lowest)

If there is a domovea system in the installation, the reference date and time will come from this system (priority 1). Otherwise, it is the weather station that will send the reference date and time (priority 2). And finally, if there are none of these products in the installation, the reference date and time will be sent by a clock (See the illustration below).



Note: At the end of detection, the configuration tool sends the date and time on the predefined group address Date and time 3, Time 3 and Date 3. This means that at the end of the scan, the products requiring the date and time are immediately updated. A request system (Date and time request) was installed for automatic management of the date and time.

■ Group address

Date 1	30/0/032
Hour 1	30/0/033
Date and time 1	30/0/034
Date 2	30/0/035
Hour 2	30/0/036
Date and time 2	30/0/037
Date 3	30/0/038
Hour 3	30/0/039
Date and time 3	30/0/040
Request Date and time	30/0/041

4.3 Outdoor temperature - frost alarm

The outdoor temperature is mainly used for the heating, ventilation and air conditioning systems. It can also be used as a display on touch screens.



The temperature value is periodically sent every 30 minutes and at each change in temperature if it is greater than +/- 0.5 °C from the last measurement.

The frost alarm operates as follows:

- The frost alarm is activated (bit = 1) if the value measured is less than the threshold value (3 °C) for 5 minutes. It will immediately be transmitted and every 10 minutes thereafter.
- The frost alarm is disabled (bit = 0) if the value measured is greater than 5 °C. It will immediately be transmitted and every 10 minutes thereafter.

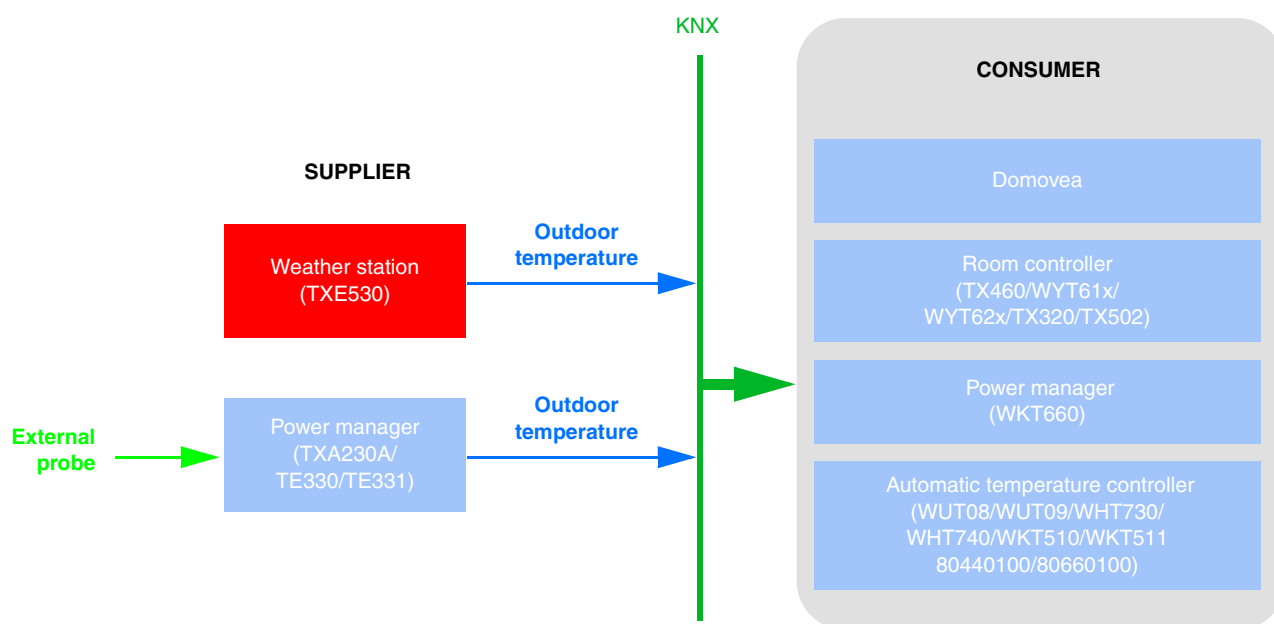
■ Links

For this function, the link can be automatically established 2 ways:

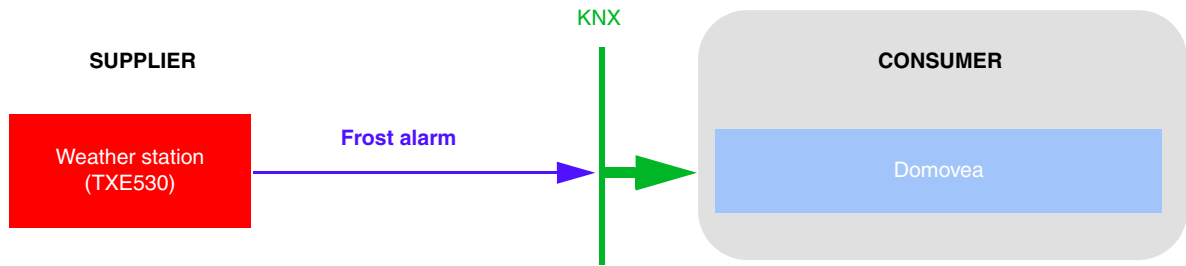
- by the presence of other compatible products
- by configuration

- Automatic links

This automatic link is used for several products. They have a channel that enables the display or use of the outdoor temperature and frost alarm.



Note: The presence of the weather station implies that the power manager requires no probe. A single outdoor temperature probe is sufficient.



■ Group address

Outdoor temperature	30/0/000
Frost alarm	30/0/012

4.4 Luminosity - Day/night

The outdoor luminosity is mainly used for lighting control systems and shading management, taking the position of the sun into account. It can also be used as a display on touch screens.



The luminosity value is periodically sent every 30 minutes and at each change if the variation is greater than 20 % compared to the last measurement.

The threshold is fixed at 10 Lux (fixed value), with a hysteresis of 2 Lux (fixed value).

The information is sent 2 times every 24 hours (switching from day to night and night to day).

The day/night information operates as follows:

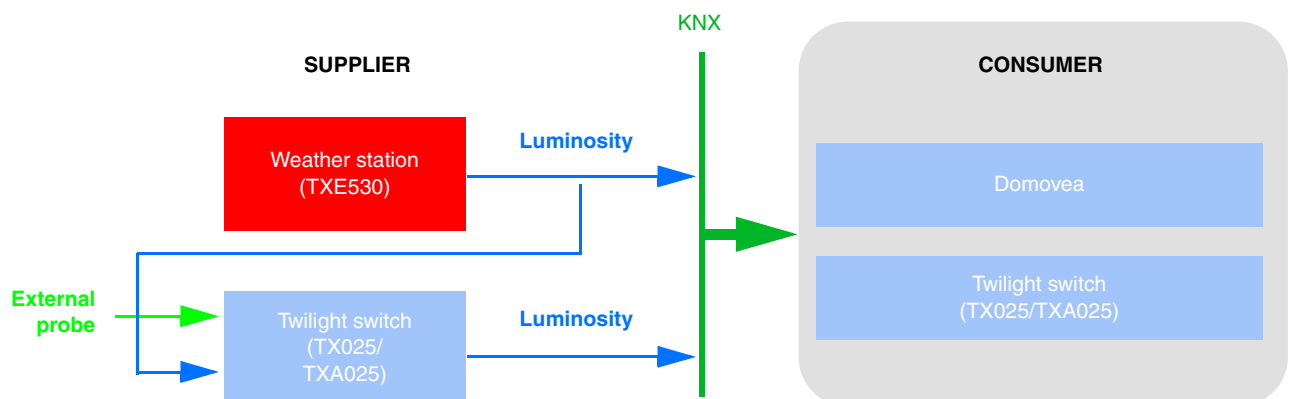
- The "Day" information is activated (bit = 0) if the value measured is greater than the threshold value + hysteresis (12 Lux) for more than one minute (fixed value).
- The "Night" information is activated (bit = 1) if the value measured is less than the threshold value (10 Lux) for one minute.

■ Links

For this function, the link is made automatically if compatible products are present in the installation.

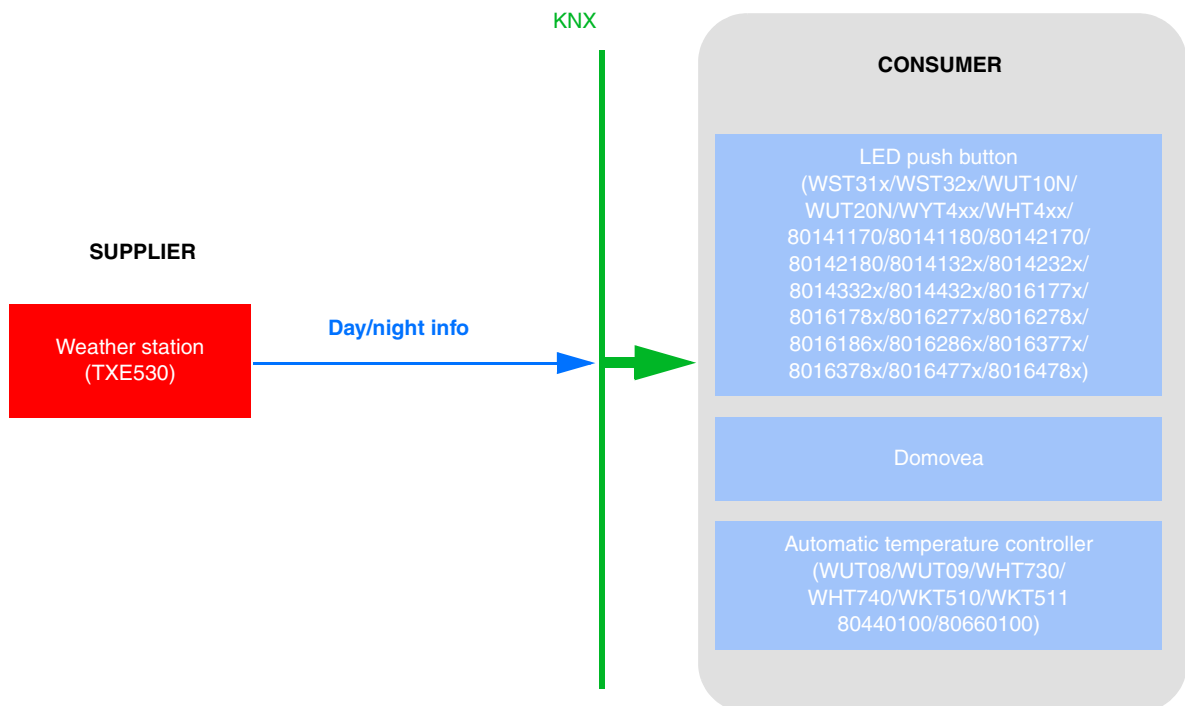
This automatic link is used by twilight switches. They have a luminosity, master and slave channel.

The domovea supervision system also uses this link but only for the slave channel. Products are in slave mode by default. They switch to master mode when a luminosity probe is connected to the product.

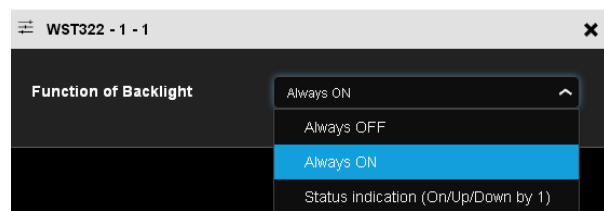


Note: The presence of the weather station implies that the twilight switch does not require a probe. A single luminosity probe is sufficient.

This automatic link is used by LED push buttons, thermostats and the domovea supervision system. They have a channel to control the indicator lights on the front panel.

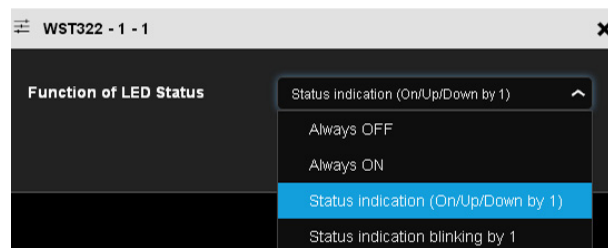


To control the push button lighting using the day/night information, the FPL function must be set up in the product.



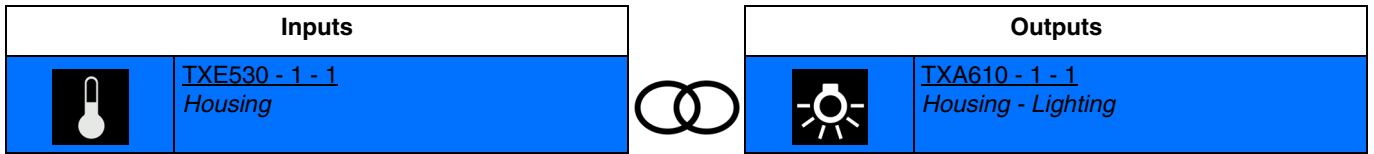
To control the push button LEDs using the day/night information, the LED function must be set up in the product.

*Note: For the **LED function status** setting to appear, a function must be defined in the corresponding input.*



- Another possible link:

It is possible to use an ON/OFF output (outdoor lighting) from the Day/night function.

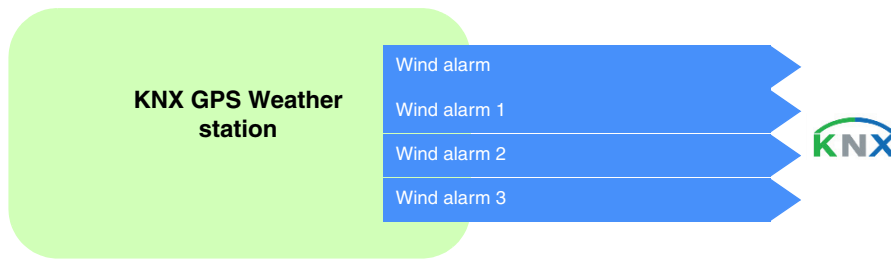


■ Group address

Luminosity	30/0/002
Day/night	30/0/003

4.5 Wind speed - wind alarm

The wind speed value is mainly used to secure shutters and blinds. It can also be used as a display on touch screens.



The wind speed value is periodically sent every 30 minutes and at each change if the variation is greater than 20% compared to the last measurement.

The wind alarm (1 to 3) operates as follows:

- The wind alarm is activated (bit = 1) if the value measured is greater than the threshold value for more than 2 seconds. It is sent immediately and every 10 minutes thereafter.
- The wind alarm is activated (bit = 0) if the value measured is greater than the threshold value for more than 5 seconds. It is sent immediately and every 10 minutes thereafter.

Wind alarm 1: The alarm is activated if the wind speed > 4 m/s (14.4km/h)

Wind alarm 2: The alarm is activated if the wind speed > 8 m/s (28.8km/h)

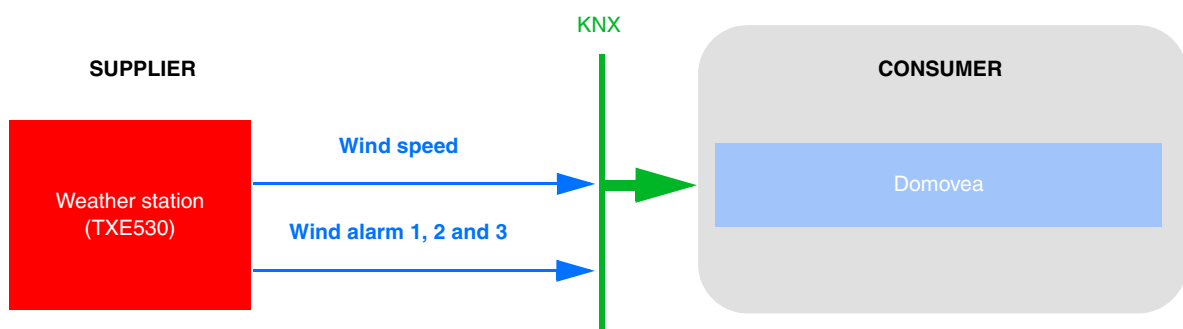
Wind alarm 3: The alarm is activated if the wind speed > 12 m/s (43.2km/h)

■ Links

For this function, the link can be automatically established 2 ways:

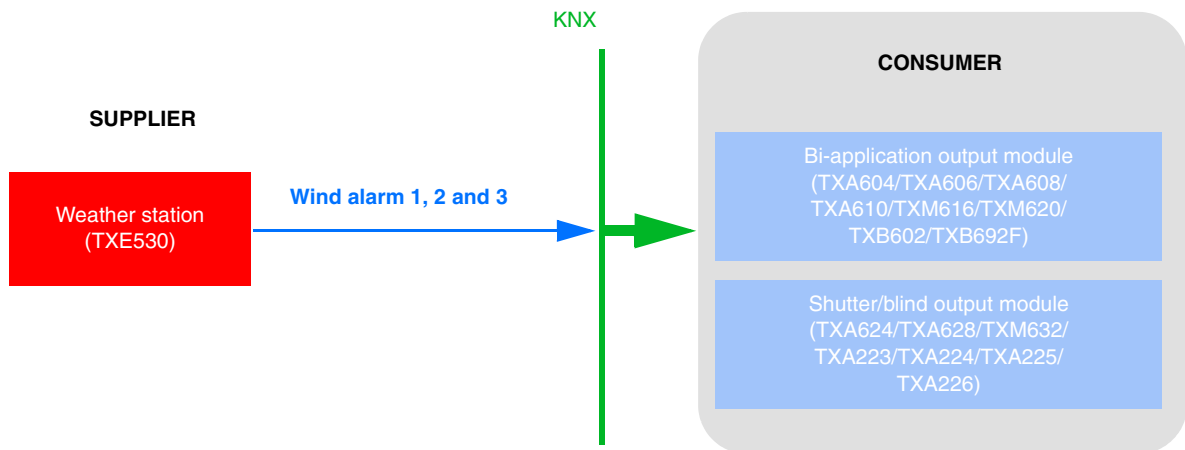
- By the presence of other compatible products
 - By configuration
- Automatic links

This automatic link is used by the domovea supervision system. It has a channel that can display the wind speed and wind alarms.



- Automatic links through configuration

This link is established depending on the configuration of products. For the wind alarm, please refer to the shutter configuration.



- TXA624 configuration:

Wind Alarm level	No Wind alarm
Position on wind alarm	Not active

Parameter	Description	Value
Wind alarm stepping switch	Activates the shutter output on receipt of wind alarms 1, 2 or 3.	No wind alarm* Wind alarm 1 Wind alarm 2 Wind alarm 3
Position on wind alarm	Defines the status of the shutter output on receipt of wind alarms 1, 2 or 3.	Not active* Up Down

Note: For the TXA223 TXA224 TXA225 and TXA226 shutter output modules, only wind alarm 1 is available.

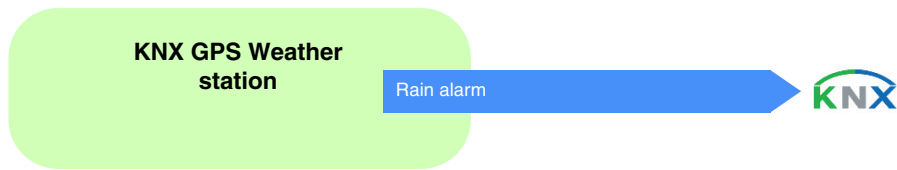
■ Group address

Wind speed	30/0/001
Wind alarm 1	30/0/008
Wind alarm 2	30/0/009
Wind alarm 3	30/0/010

* Default value

4.6 Rain alarm

The rain alarm mainly controls the opening and closing of canopies or skylights. It can also be used as a display on touch screens.



The rain alarm operates as follows:

- The rain alarm is activated (bit = 1) when rain is detected. It will immediately be transmitted and every 10 minutes thereafter.
- The rain alarm is deactivated (bit = 0) after a period of 5 minutes after rain has stopped. It will immediately be transmitted and every 10 minutes thereafter.

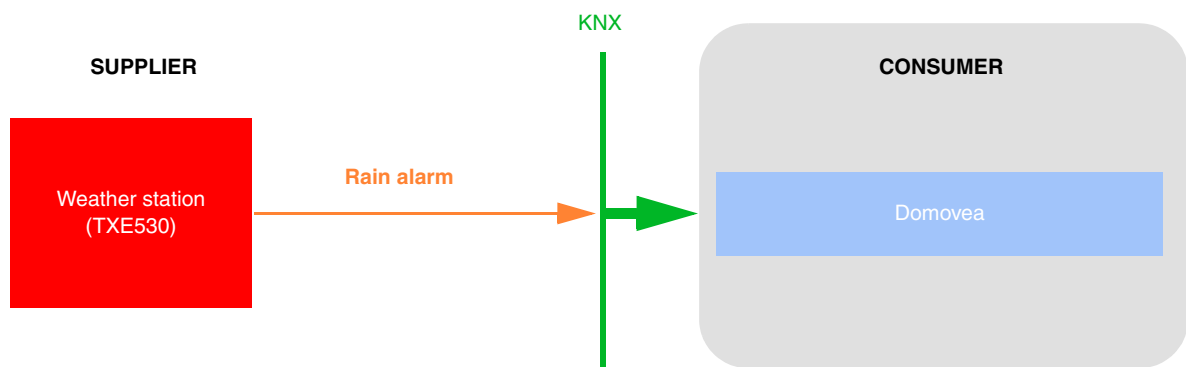
■ Links

For this function, the link can be automatically established 2 ways:

- by the presence of other compatible products
- by configuration

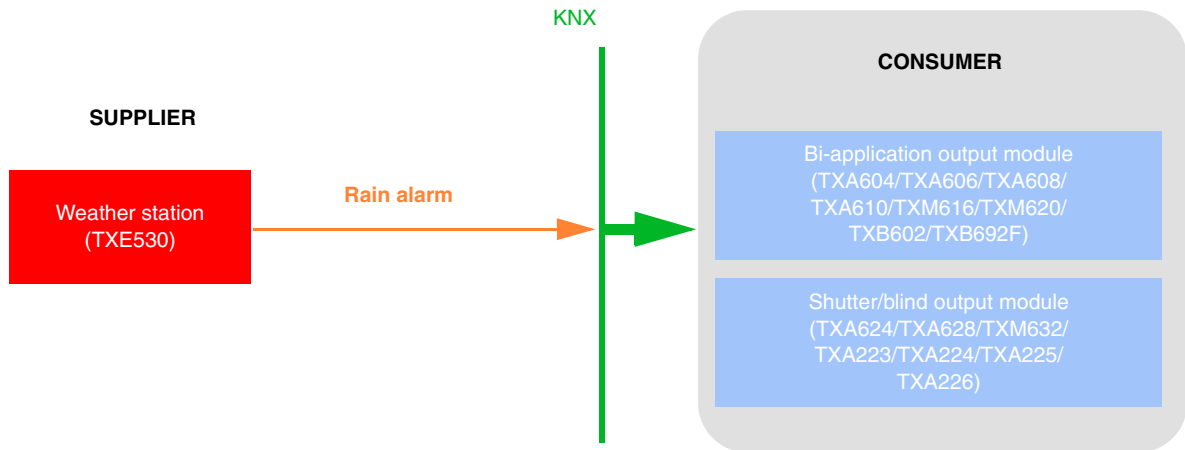
- Automatic links

This automatic link is used for several products. It has a channel that can display or use the rain alarm.



- Automatic links through configuration

This link is established depending on the configuration of products. For the rain alarm, please see the shutter configuration.



- TXA624 configuration:

Rain Alarm	No
Position on rain alarm	Not active

Parameter	Description	Value
Rain alarm	Activates the shutter output on receipt of the rain alarm.	Yes No*
Position on rain alarm	Defines the status of the shutter output on receipt of the rain alarm	Not active* Up Down

■ Group address

Rain alarm	30/0/011
------------	----------

* Default value

4.7 Shading

The aim of the shading function is to provide further comfort for people in the room by preventing glare from the sun. To simplify the use and configuration of the weather station, we recommend working with facades that are fitted only with shutters or only with blinds.

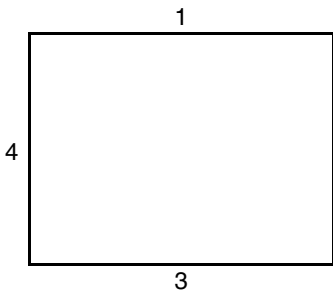
The shading control options (blind or louver position and slat tilt positions) are associated with facades.

The weather station is particularly suitable in the following cases:

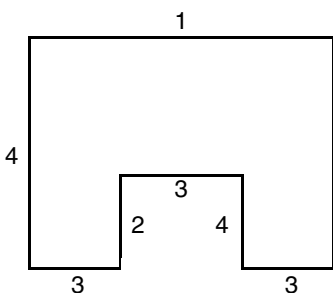
- The shading function (comfort priority) when people are present.
- Heat recovery and protection (energy saving priority) when the room is empty.



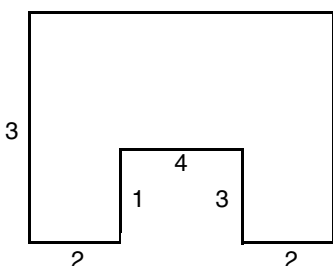
Facade controls



The majority of buildings have 4 facades. Creating a separate command for the sun protection of each facade is recommended.



For U shaped buildings, only 4 facades must be controlled separately, insofar as several are facing the same direction.



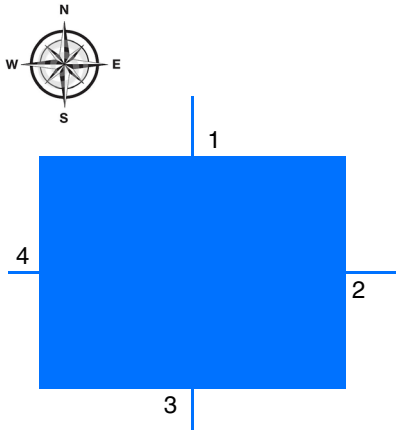
To manage shading on a facade with both blinds and shutters, two facades must be registered: one for blinds and one for shutters. Here, facade 2 is for shutters and facade 4 is for blinds.

Facade direction

The direction of each facade must be defined in the setup for the shading function to operate correctly.

- Defining the direction of each facade used.

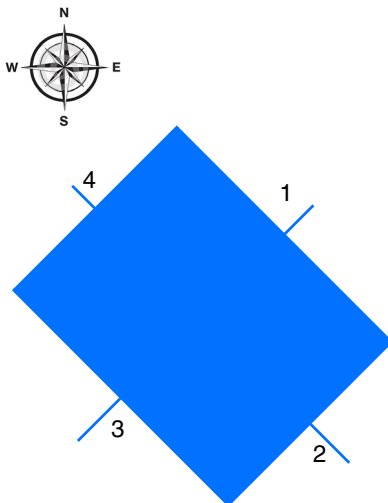
Example 1:



Direction:

- Facade 1: N = 0°
- Facade 2: E = 90°
- Facade 3: S = 180°
- Facade 4: W = 270°

Example 2:



Direction:

- Facade 1: NE = 45°
- Facade 2: SE = 135°
- Facade 3: SW = 225°
- Facade 4: NW = 315°

Orientation facade 1	N - 0°
Shading control facade 1	Not used
Shading max position facade 1	80
Orientation facade 2	E - 90°
Shading control facade 2	Not used
Shading max position facade 2	80
Orientation facade 3	S - 180°
Shading control facade 3	Not used
Shading max position facade 3	80
Orientation facade 4	O - 270°
Shading control facade 4	Not used
Shading max position facade 4	80

Parameter	Description	Value
Facade orientation x	This setting defines the direction of the facade according to the compass points.	N = 0° NE = 45° E = 90° SE = 135° S = 180° SW = 225° W = 270° NW = 315° All = 360°
Shading facade x	The facade is not used for position tracking. The facade is used for position tracking the rolling shutters only. The facade is used for position tracking the blinds (position and tilt).	Not active* Position Slat angle

x = 1 to 4

Note: To manage a glazed roof or partially glazed roof, the roof must be declared as one of the facades with the setting (All = 360°).

Note: This is intended only for blinds with horizontal slats.

* Default value

Shading concept for rolling shutters and slat blinds:

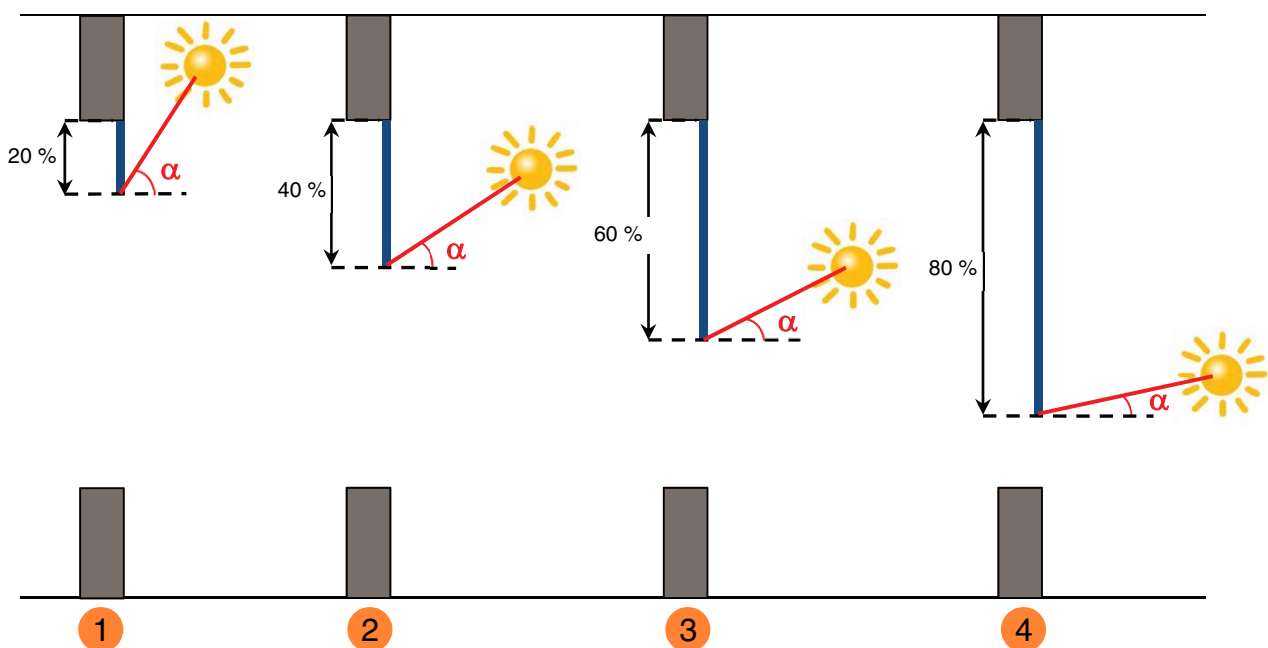
With shading tracking, the sun protection is not fully lowered, thus allowing the sun to penetrate the room. In this way, users at the bottom of the window can see out and plants on the windowsill will receive sunshine.

Note: Shading tracking can only be used when the sun protection is lowered from top to bottom (such as shutters, textile sun protection or blinds with horizontal slats). This function is not usable for a sun protection that is pulled from one side to the other or pulled in front of a window from both sides.

Shading with roller shutters

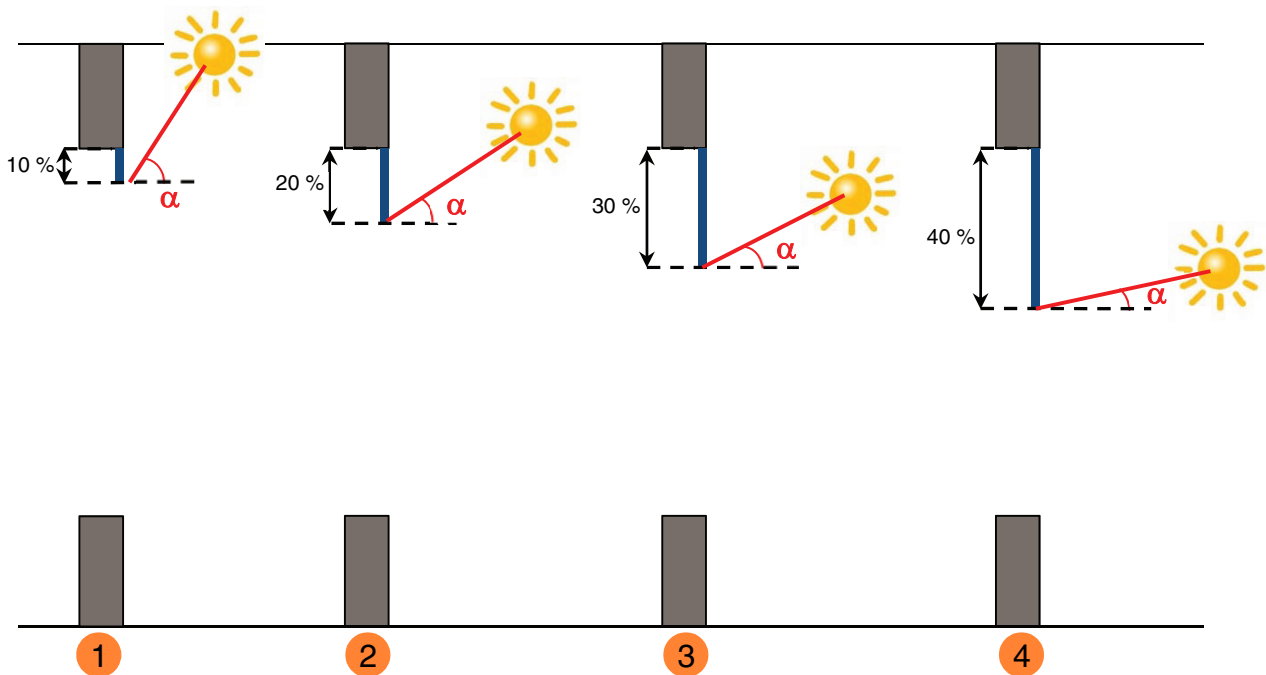
Shading is automatically controlled if the shading conditions on the relevant facade are fulfilled: luminosity threshold > 40 klux and sun on the facade. The shading thus moves in line with the path of the sun. It starts with a minimum shutter closing value of 20 % and a maximum configurable closure between 20 and 80 %. Full automatic closure can only be obtained if the heat protection function is activated.

Example of 80% maximum closure (default value):



Example	Shutter position	Sun position - Angle α between
1	20%	46° ... 90°
2	40%	31° ... 45°
3	60%	16° ... 30°
4	80%	0° ... 15°

Example with maximum closure set at 40%:



Example	Shutter position	Sun position - Angle α between
1	10%	46° ... 90°
2	20%	31° ... 45°
3	30%	16° ... 30°
4	40%	0° ... 15°

Sun protection operation for shutters:

If the luminosity level is sufficient (more than 40 Klux for more than one minute) **and** the sun is shining on the facade:

- The shutter is positioned in line with the path of the sun between 20 % closure and the maximum shading position defined by the configuration (20 to 80 %).

If the luminosity level is insufficient (less than 32 Klux for more than 15 minutes) **or** the sun is not shining on the facade:

- The shutter is positioned at a fixed value of 0 %.

Parameter	Description	Value
Max. position for facade x shading	This setting defines the maximum permitted closure for automatic shading control.	20... 80 %*

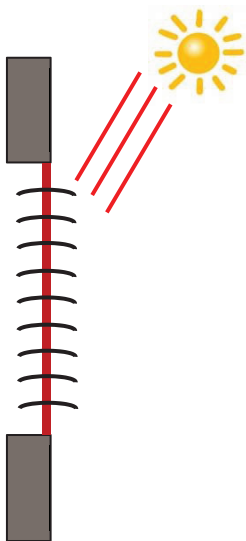
x = 1 to 4

*Note: The value of this parameter is taken into account only when the **Facade shading x** parameter has the value: **Position tracking for shutters**.*

Shading with slat blinds

During slat adjustment, the horizontal slats of the blinds are not fully closed; rather they are matched to the sun condition and set automatically in such a way that the sun cannot shine directly into the room.

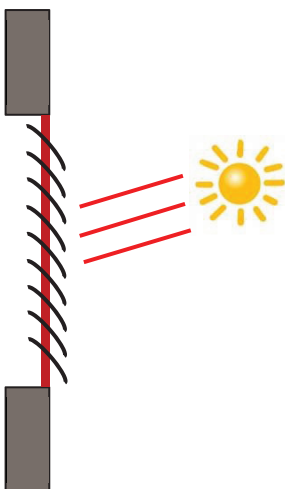
However diffuse daylight can enter the room between the slats and so provide glare-free room lighting. Slat adjustment of an external blind prevents the entry of heat from sunshine into the room and, at the same time, reduces the cost of electricity for room lighting.



Sun protection at high sun elevations

Shading is automatically controlled if the shading conditions on the relevant facade are fulfilled: luminosity threshold > 40 klux and sun on the facade. To limit the number of trips, the shading starts by fully lowering the blinds following the direction of the slats at 50 %. The low position will be maintained as long as the shading function is activated, and adjustments are made simply by orienting the slats depending on the position of the sun. The slats are positioned almost horizontally, so that the sun does not directly penetrate the room.

Position: 100 %
Tilt tracking: 50 %



Sun protection at medium sun elevations

The low position is maintained and the slats are re-closed a little more to prevent sunlight from directly entering the room. Diffuse daylight, however, can still continue to enter and so provide lighting for the room (daylight use).

Sun protection at low sun elevations

The slats are automatically closed to an extent where the sun cannot shine directly into the room.

Position: 100 %
Tilt tracking: 80 %

* Default value

Sun protection operation for blinds:

If the luminosity level is sufficient (more than 40 Klux for more than one minute) **and** the sun is shining on the facade:

- The blind is positioned at the fixed value of 100 % (lower position).
- The blind is tilted at a value calculated by the weather station depending on the position of the sun.

If the luminosity level is insufficient (less than 40 klux for more than 10 minutes):

- The blind remains in the 100 % lowered position.
- The blind tilts the slats horizontally (50 % value).

If at the end of 30 minutes, the luminosity level is still insufficient (less than 40 Klux for more than 10 minutes) **or** the sun is not shining on the facade:

- The blind is positioned at the fixed value of 0 %.
- The blind tilts the slats at a fixed value of 0 %.

For sun protection using blinds, it is set at the lowest position (100%) while the shading function is activated. This limits positioning movements, so shading is carried out only by orienting the slats.

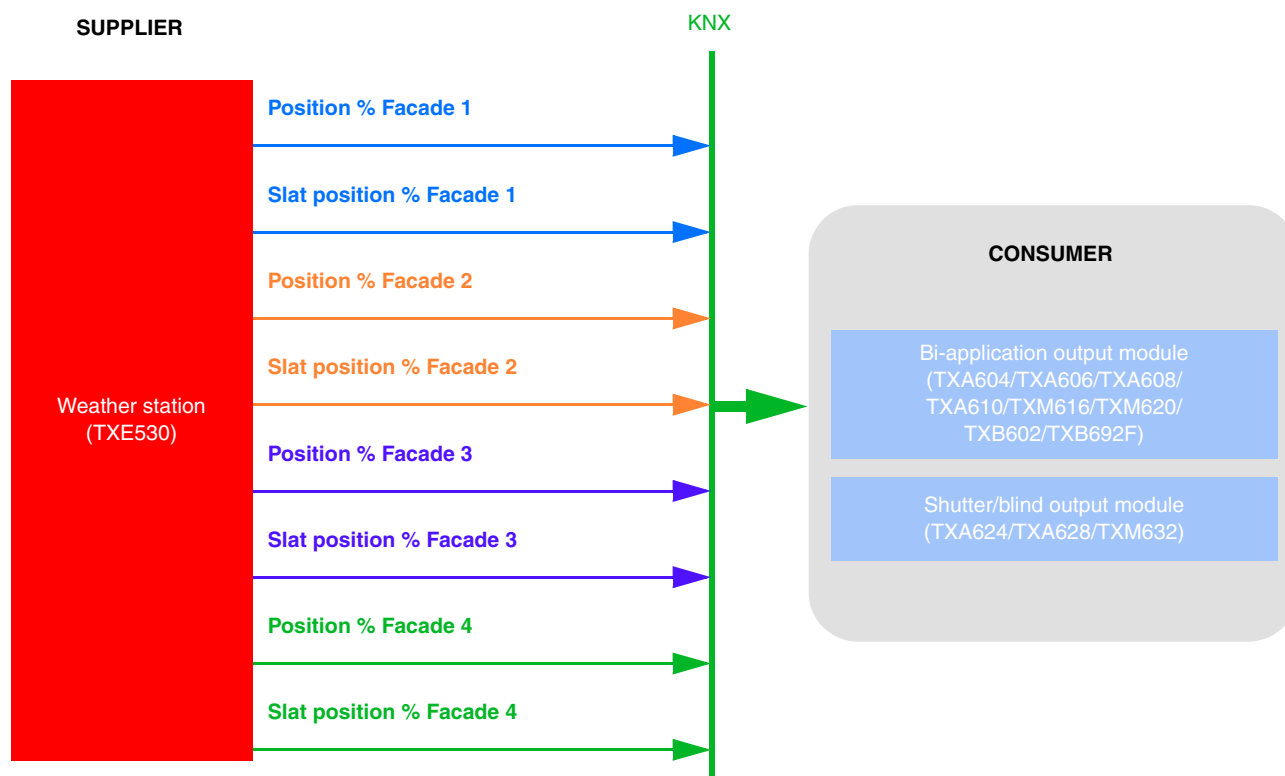
*Note: The value of the **Max. position for facade x shading** setting has no effect when the **Facade x shading** setting has the value: **Position and slat tracking for blinds**.*

Value fixed by facade:

Parameter	Value
Luminosity threshold	40 Klux
Hysteresis of the luminosity threshold	- 8 Klux
Tilting in % after a slat control of 50%	50% (90°)
Tilting in % after a slat control of 100%	100% (180°)

■ Links

For this function, the link is established through configuration. This configuration positions the addresses of predefined groups for solar tracking.



The configuration is established in 2 steps:

- On the weather station:

Orientation facade 1	N - 0°
Shading control facade 1	Not used
Shading max position facade 1	80
Orientation facade 2	E - 90°
Shading control facade 2	Not used
Shading max position facade 2	80
Orientation facade 3	S - 180°
Shading control facade 3	Not used
Shading max position facade 3	80
Orientation facade 4	O - 270°
Shading control facade 4	Not used
Shading max position facade 4	80

- Define the orientation of the different facades (**Facade orientation x**)
 - Define the type of shading on the different facades (**Facade orientation x**). This setting determines whether shading is established using the shutter position or the blind tilt.
Note: This is intended only for blinds with horizontal slats.
 - Define the maximum shutter position for shading (20-80%) for each facade. This setting is only valid if shading is established using the shutter position.
- On the shutter output module:

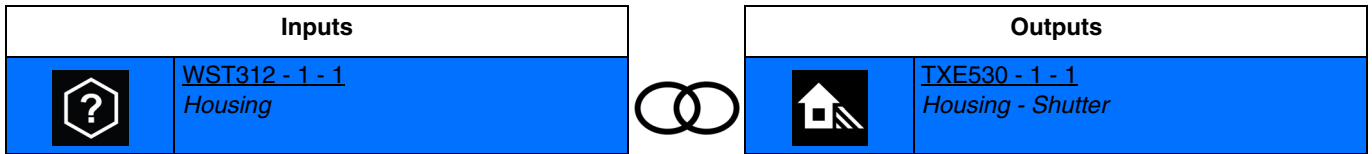
TXA624C - 1 - 1

Closing type	Shutter and blind
Sun position	<ul style="list-style-type: none"> Facade 1 <li style="background-color: #007bff; color: white;">Facade 1 Facade 2 Facade 3 Facade 4 No Facade

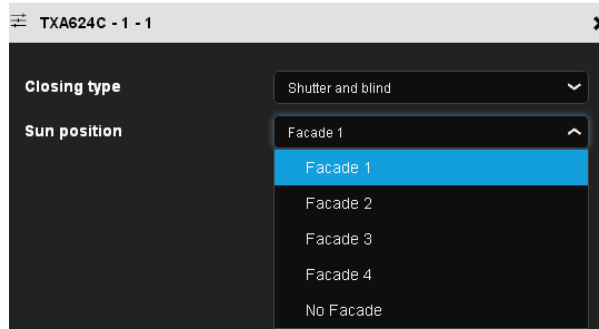
- Define on which facade the shutter is found. This setting triggers the shutter shading function.

- Another possible link:

The shading function is activated by default. Shading activation or deactivation can be established using domovea. This can also be done using the push button, as shown below:



This link activates shading via the push button.



- Select the facade to activate.

■ Group address

Position % Facade 1	30/0/016
Slat position % Facade 1	30/0/017
Position % Facade 2	30/0/018
Slat position % Facade 2	30/0/019
Position % Facade 3	30/0/020
Slat position % Facade 3	30/0/021
Position % Facade 4	30/0/022
Slat position % Facade 4	30/0/023

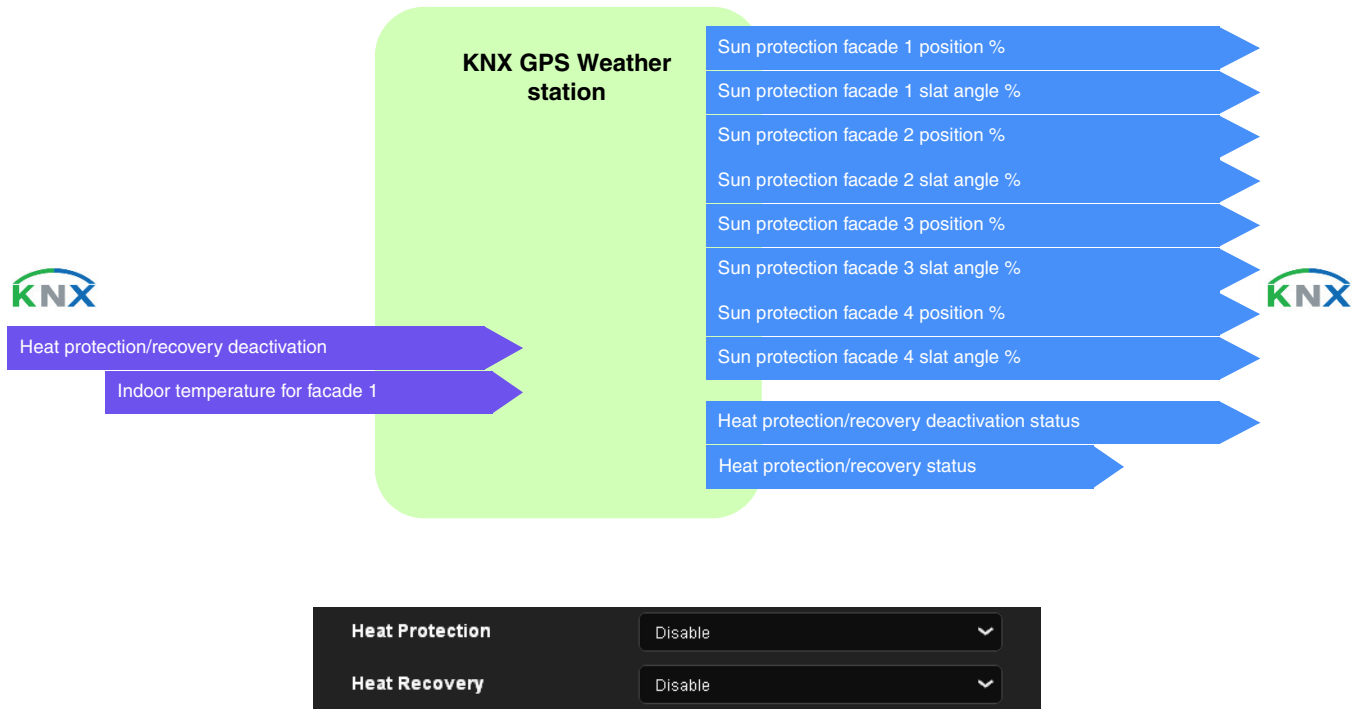
4.8 Heat protection/recovery

This function manages the indoor temperature according to sunlight and season. In summer, the heat protection allows for the blinds to be positioned so as to limit warming of the room.

In winter, heat recovery allows for the blinds to be positioned so as to reheat the room using sunlight, thus benefiting from a free heat source.

These two functions result in the full opening or closing of shutters or blinds.

Unlike shading, they will mainly be used when the room is empty.



Heat protection

Heat protection is used to prevent the room from overheating and to limit the use of the air conditioning system.

It depends on:

- the luminosity on the facade (more than 40 klux)
- the position of the sun on the facade
- the outdoor temperature on all of the facades
- or the indoor temperature on the facade 1

Heat protection operation:

If the luminosity level is sufficient (more than 40 Klux for more than one minute) **and** the sun is shining on the facade **and** the outdoor temperature is greater than 33 °C **or** the indoor temperature is greater than 28°C on the facade 1:

- The heat protection is activated. The shutters and blinds close completely. This function is prioritized on the shading control.

If the luminosity level is insufficient (less than 40 Klux for more than 10 minutes) **or** the sun is not shining on the facade **or** the outdoor temperature is less than 28 °C **and** the indoor temperature is less than 25°C for facade 1 for more than 15 minutes:

- The heat protection is deactivated. The shutters and blinds remain in position.

Parameter	Description	Value
Heat protection	The heat protection automatic control is:	
	Not active	No*
	Active	Yes

Heat recovery

To save energy, the heat recovery system contributes to heating up the room by using the sun's energy.

It depends on:

- the luminosity on the facade
- the position of the sun on the facade
- the outdoor temperature on all of the facades
- or the indoor temperature on the facade 1

Heat recovery operation:

If the luminosity level is sufficient (more than 40 Klux for more than one minute) **and** the sun is shining on the facade **and** the outdoor temperature is less than 12 °C **and** the indoor temperature is less than 22 °C for facade 1:

- Heat recovery is activated. The shutters and blinds open completely. **Warning:** This function should not be used for openings that are part of the anti-intrusion system.

If the luminosity level is insufficient (less than 40 Klux for more than 10 minutes) **or** the sun is not shining on the facade **or** the outdoor temperature is greater than 28 °C **or** the indoor temperature is greater than 25 °C for facade 1:

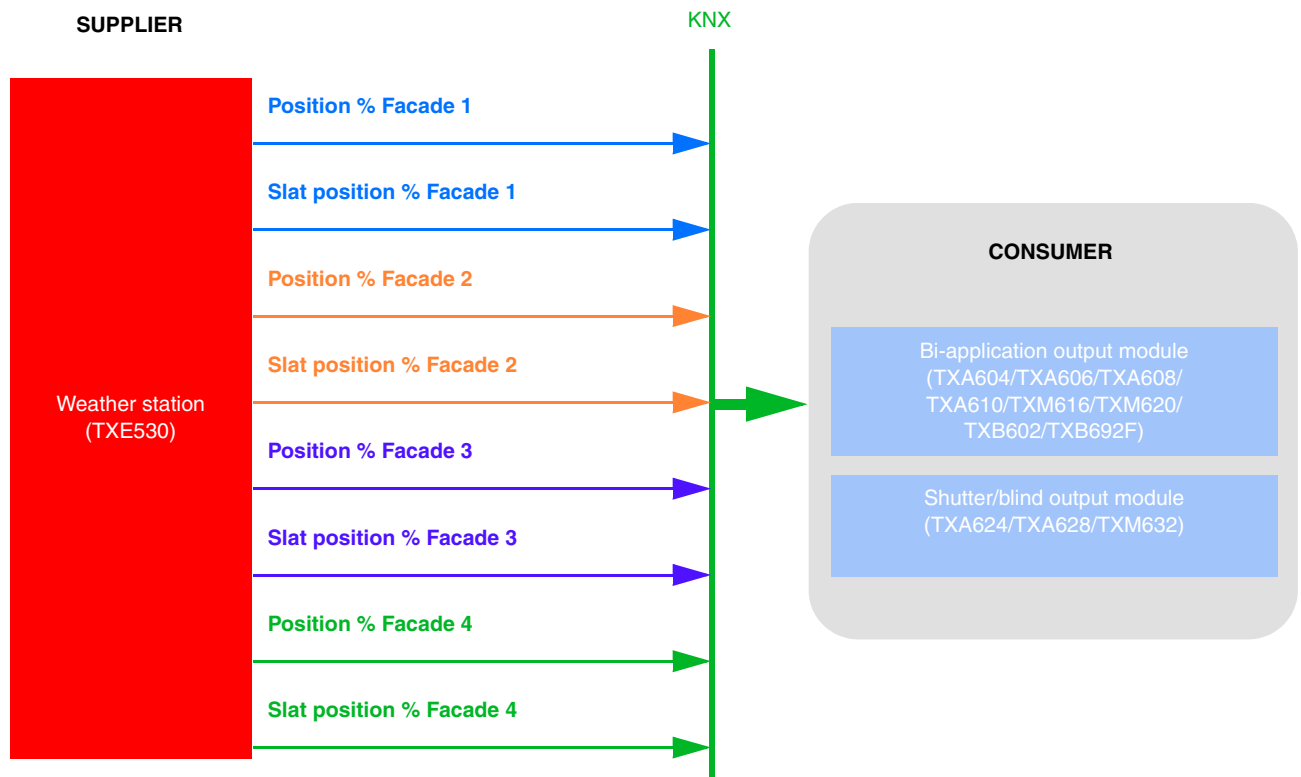
- Heat recovery is disabled. The shutters and blinds close completely.

Parameter	Description	Value
Heat recovery	Automatic control of heat recovery is:	
	Not active	No*
	Active	Yes

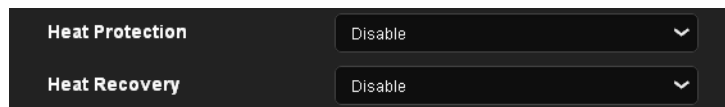
* Default value

■ Links

For this function, the link is established through configuration. This setting positions the addresses of predefined groups for heat protection/recovery.

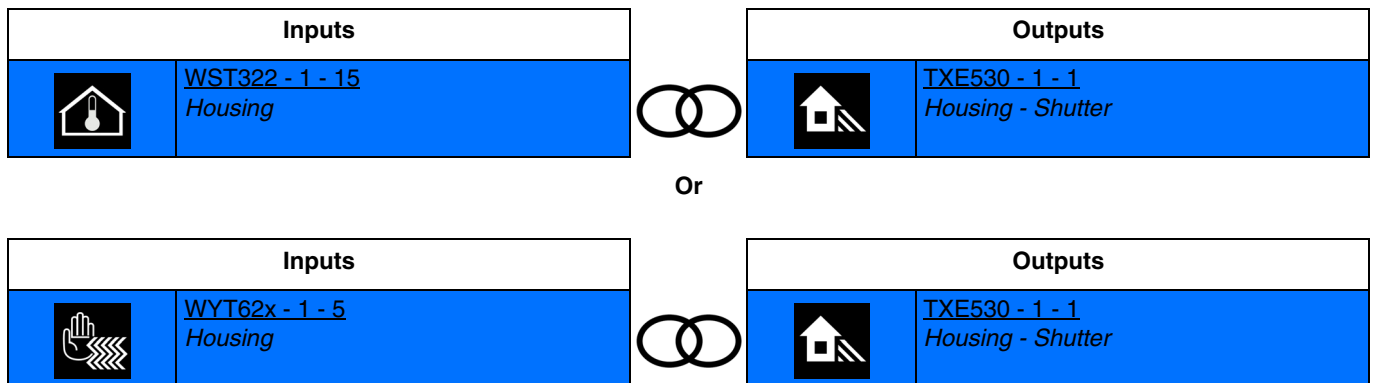


The setting is established on the weather station:



- Activate the heat protection and/or heat recovery.

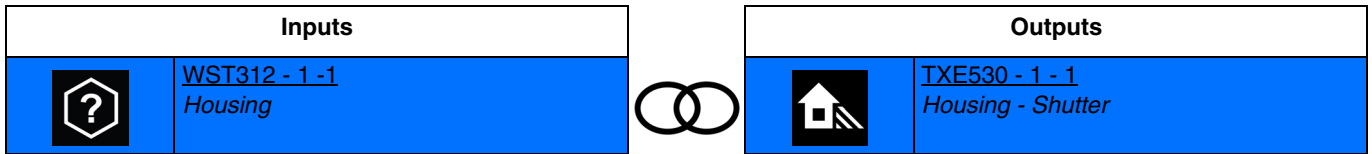
A link must be created with the thermostat for the indoor temperature of facade 1.



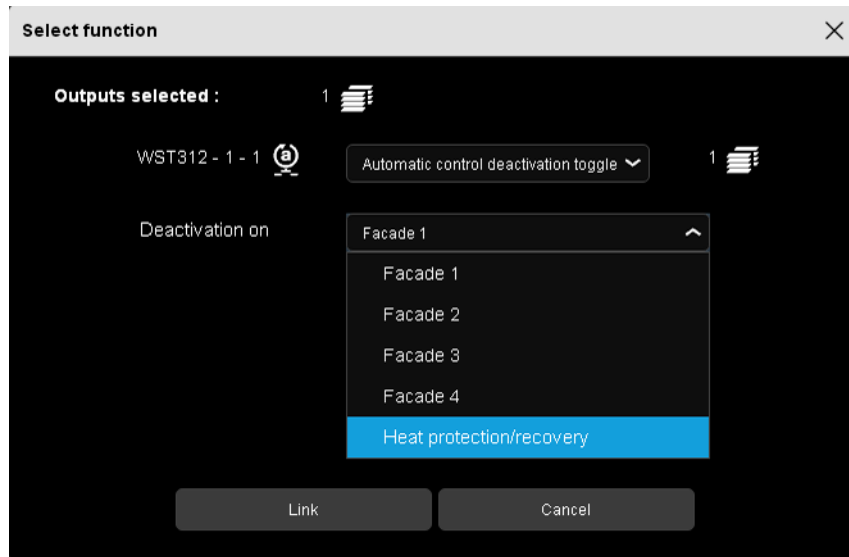
Note: This link is optional for this function.

- Another possible link:

The heat protection and heat recovery function is activated by default. Activation or deactivation of heat protection and heat recovery can be established using domovéa. This can also be done using the push button, as shown below:



This link activates heat protection/recovery.



- Select the facade to activate.

■ Group address

Position % Facade 1	30/0/016
Slat position % Facade 1	30/0/017
Position % Facade 2	30/0/018
Slat position % Facade 2	30/0/019
Position % Facade 3	30/0/020
Slat position % Facade 3	30/0/021
Position % Facade 4	30/0/022
Slat position % Facade 4	30/0/023

5. Appendix

5.1 Specifications

Rated voltage KNX	DC 30 V
Current consumption KNX max.	6 mA
Auxiliary voltage	DC 12 ... 40 V TBTS
	AC 12 ... 24 V TBTS
Auxiliary current max.	185 mA - 12 V DC
	80 mA - 24 V DC
Operating temperature	-30 ... +50 °C
Operating altitude max.	2000 m
Storage/transport temperature	-30 ... +70 °C
Conductor cross-section (rigid) max.	0,5 mm ²
Dimensions (W x H x D)	96 x 77 x 118 mm
Weight	170 g
Degree of protection	IP44
Surge voltage	1 500 V
Overvoltage category	III
Degree of contamination	2
Software class	A
Action type type	2
Ball test temperature	75 °C
Precipitation sensor:	
Measurement precipitation	1 bit
Heating	1,2W
Temperature sensor:	
Measuring range	-30 ... +80°C
Resolution	0,1 °C
Measuring accuracy	± 0,5 °C à +10 ... +50 °C
	± 1 °C à -10 ... +85 °C
	± 1,5 °C à -25 ... +150 °C
Wind sensor:	
Measuring range	0 ... 35 m/s
Resolution	0,1 m/s
Measuring accuracy ± 15% of measured value with an incidental flow from 90 ... 270 °	
Brightness/twilight sensor	
Cardinal direction South	
Measuring range	0 lx ... 150 klx
Measuring accuracy	± 20 % à 0 lx ... 10 klx
	± 15 % à 10 ... 150 klx
Test mark KNX, CE	
Conformity according to EMC Directive 2004/108/EC, Low Voltage Directive 2006/95/EC	
Standards	EN 50491-3
	EN 50491- 5 -2: 2011
	EN 60730 - 1: 2011

5.2 Characteristics

Device	TXE530
Max. number of group addresses	254
Max. number of allocations	255
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