



Windancer KNX(-GPS)

Weather Station with cup anemometer

Item numbers 71236 (Windancer KNX-GPS) and 71235 (Windancer KNX)



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This manual is amended periodically and will be brought into line with new software releases. The change status (software version and date) can be found in the contents footer. If you have a device with a later software version, please check **www.elsner-elektronik.de** in the menu area "Service" to find out whether a more up-to-date version of the manual is available.

Clarification of signs used in this manual



Safety advice.



Safety advice for working on electrical connections, components, etc.

DANGER!

... indicates an immediately hazardous situation which will lead to death or severe injuries if it is not avoided.

WARNING!

... indicates a potentially hazardous situation which may lead to death or severe injuries if it is not avoided.

CAUTION!

... indicates a potentially hazardous situation which may lead to trivial or minor injuries if it is not avoided.



ATTENTION! ... indicates a situation which may lead to damage to property if it is not avoided.

ETS

In the ETS tables, the parameter default settings are marked by underlining.

1. Safety and operating instructions



Installation, testing, operational start-up and troubleshooting should only be performed by a qualified electrician.



CAUTION! **Live voltage!**

- Inspect the device for damage before installation. Only put undamaged devices into operation.
 - Comply with the locally applicable directives, regulations and provisions for electrical installation.
 - Immediately take the device or system out of service and secure it against unintentional switch-on if risk-free operation is no longer guaranteed.
-

Use the device exclusively for building automation and observe the operating instructions. Improper use, modifications to the device or failure to observe the operating instructions will invalidate any warranty or guarantee claims.

Operate the device only as a fixed-site installation, i.e. only in assembled condition and after conclusion of all installation and operational start-up tasks, and only in the surroundings designated for it.

Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

For information on installation, maintenance, disposal, scope of delivery and technical data, please refer to the installation instructions.

2. Description

The **Weather Station Windancer KNX(-GPS)** for the KNX building bus system measures temperature, wind speed, brightness and recognises precipitation.

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.

The Windancer KNX-GPS model additionally receives the GPS signal for time and location and calculates the exact position of the sun (azimuth and elevation).

The integrated shade control system allows intelligent control of the sun protection of up to eight façades.

Functions of both models:

- **Wind measurement** with cup anemometer
- **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**
- **Switching outputs** for all measured values. Threshold values can be adjusted per parameter or via communication objects
- **6 AND and 6 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

Functional adicional Windancer KNX:

- **Brightness measurement** (current illuminance). Measurement with 3 separate sensors (east, south, west). Separate threshold values for night

Functional adicional Windancer KNX-GPS:

- **Brightness measurement** (current illuminance). Measurement with 3 separate sensors, output of the current highest value (one maximum value). Separate threshold values for night
- **GPS receiver**, outputting the current time and location coordinates. The **Weather Station Windancer KNX-GPS** also computes the position of the sun (azimuth and elevation)
- **Shade control** for up to 8 façades with slat tracking and shadow edge tracking
- **Weekly and calendar time switch:** The weather station receives the time and date from the integrated GPS receiver. The **weekly time switch** switches up to 4 different periods per day. With the **calendar time switch** up to 3 additional time periods can be defined, in which up to 2 On/Off switches take place. The switching outputs can be used as communications objects. The switch times are set via parameters

3. Initial start-up

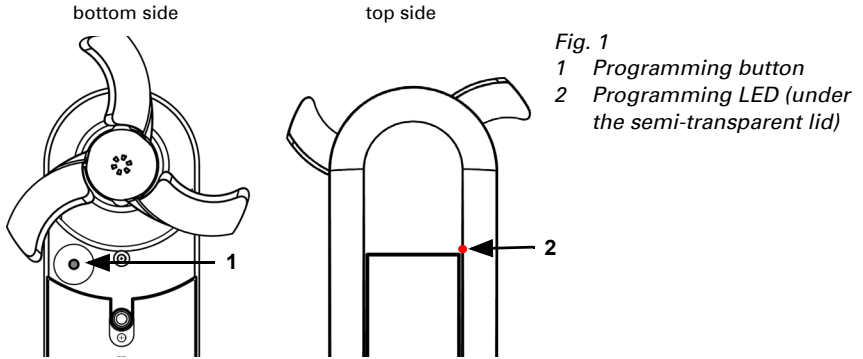
Configuration is made using the KNX software ETS. The **product file** can be downloaded from the Elsner Elektronik website on **www.elsner-elektronik.de**.

After the bus voltage has been applied, the device will enter an initialisation phase lasting a few seconds. During this phase no information can be received or sent via the bus.

3.1. Addressing the equipment

The physical address is assigned by the ETS. The device has a sensor and a control LED (fig. 1).

The equipment is delivered with the bus address 15.15.255. Another address can be programmed using the ETS.



4. Transmission protocol

Units:

Temperatures in degrees Celsius

Brightness in lux

Wind in metres per second

Azimuth and elevation in degrees

4.1. List of all communications objects (Windancer KNX-GPS)

Abbreviations Flags:

C Communication

R Read

W Write

T Transfer

U Update

No	Text	Function	Flags	DPT type	Size
0	Output auxiliary voltage	Auxiliary voltage status (1=ON 0=OFF)	R-CT-	[1.1] DPT_Switch	
Send the status of the Auxiliary Voltage (1 = Used; 0 = Not Used)					
1	Input/Output GPS	GPS date	RWC-TU	[11.1] DPT_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.					
2	Input/Output GPS	GPS time	RWC-TU	[10.1] DPT_TimeOfDay	
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.					
3	Input date and time	Date and time request	-WC--	[1.17] DPT_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					
4	Output GPS	GPS malfunction	R-CT-	[1.1] DPT_Switch	
If enabled, gps error is recognised = 1 when no value received after a 20min-2hr time. (0 = No Error) Default					
5	Output location	Location longitude [°]	R-CT-	[14.7] DPT_ValueAngleDeg	
The longitude can be read in degrees [°] (Provided from the GPS)					

No	Text	Function	Flags	DPT type	Size
6	Output location	Location latitude [°]	R-CT-	[14.7] DPT_Val- ue_AngleDeg	
The latitude can be read in degrees [°] (Provided from the GPS)					
7	Output Rain 1	Rain Switching output 1	R-CT-	[1.1] DPT_Switch	
This Object sends 1 if Rain is detected (Rain=1; No Rain=0). By default 0 min delay for rain detection & 5 min delay for dry condition. These delay values can be changed by parameters and are valid until they are changed using the communication objects.					
8	Output Rain 2	Rain Switching output 2	R-CT-	[1.1] DPT_Switch	
This Object sends 1 if Rain is detected (Rain=1; No Rain=0). Fixed 0 min delay for rain detection and 5 min delay for dry condition.					
9	Input Rain	Switch delay to rain	RWC--	[9.10] DPT_Val- ue_Time1	
The delay can be set (in sec) for Rain recognition for one time.					
10	Input Rain	Switching delay to no rain	RWC--	[9.10] DPT_Val- ue_Time1	
The delay can (in sec) for No Rain recognition for one time					
11	Output Night	Night Switching output	R-CT-	[1.1] DPT_Switch	
Used to detect Night when illumination is less than or equal a set value in Lux					
12	Input Night	Switching delay on night	RWC--	[9.10] DPT_Val- ue_Time1	
Delay time in sec for output Obj.No. 332 when brightness value is Less than or equal Obj.No. 331					
13	Input Night	Switching delay to non-night	RWC--	[9.10] DPT_Val- ue_Time1	
Delay time in sec for output Obj.No. 332 when brightness value is higher than Obj.No. 331					
14	Output temperature measurement value	Temperature measured value	R-CT-	[9.1] DPT_Val- ue_Temp	
Measured Value of the internal Sensor					
15	Input temperature measurement value	Temperature measurement val- ue requirement min./max.	-WC--	[1.17] DPT_Trig- ger	
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					

No	Text	Function	Flags	DPT type	Size
16	Output temperature measurement value	Temperature measurement value minimum	R-CT-	[9.1] DPT_Value_Temp	
Minimum Measured Value after Reset the bus send it back after requesting a query					
17	Output temperature measurement value	Temperature measurement value maximum	R-CT-	[9.1] DPT_Value_Temp	
Maximum Measured Value after Reset the bus send it back after requesting a query					
18	Input temperature measurement value	Temperature measurement value reset min./max.	-WC--	[1.17] DPT_Trigger	
Min./Max values reset after requesting them using the Measurement query. (Obj. No. 15)					
19	Output temperature sensor	Temperature Sensor Malfunction (0 = OK 1 = NOT OK)	R-CT-	[1.1] DPT_Switch	
When activated, it is displayed whether there is a fault on the temperature sensor (error = 1)					
20	Input / Output Temperature TV 1	Temperature TV 1 Absolute value	RWC-TU	[9.1] DPT_Value_Temp	
Reference point of setting and/or reading the threshold value 1.					
21	Input Temperature TV 1	Temperature TV 1 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	
Used to increment=1 or decrement=0 the Temp threshold value 1					
22	Input Temperature TV 1	Temperature TV 1 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 135 changes from 0 to 1, (after the measured value is over the threshold)					
23	Input Temperature TV 1	Temperature TV 1 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 135 changes from 1 to 0, (after the measured value is under the threshold)					
24	Output Temperature TV 1	Temperature TV 1 Switching output	R-CT-	[1.1] DPT_Switch	
Used to trigger actions if the measured value is above or under (considering the time delays) temperature threshold 1 (On = 1 ; Off = 0)					
25	Input Temperature TV 1	Temperature TV 1 Switch output block	RWC--	[1.1] DPT_Switch	

No	Text	Function	Flags	DPT type	Size
This is used to block the output of temperature TV 1 ('block preset values' = 1 or 'allow' = 0)					
26	Input / Output Temperature TV 2	Temperature TV 2 Absolute value	RWC-TU	[9.1] DPT_Value_Temp	
Reference point of setting and/or reading the threshold value 2.					
27	Input Temperature TV 2	Temperature TV 2 Change (1:+ 0:-)	RWC--	[1.1] DPT_Switch	
Used to increment=1 or decrement=0 the Temp threshold value 2					
28	Input Temperature TV 2	Temperature TV 2 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 142 changes from 0 to 1, (after the measured value is over the threshold)					
29	Input Temperature TV 2	Temperature TV 2 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 142 changes from 1 to 0, (after the measured value is under the threshold)					
30	Output Temperature TV 2	Temperature TV 2 Switching output	R-CT-	[1.1] DPT_Switch	
Used to trigger actions if the measured value is above or under (considering the time delays) temperature threshold 2 (On = 1 ; Off = 0)					
31	Input Temperature TV 2	Temperature TV 2 Switch output block	RWC--	[1.1] DPT_Switch	
This is used to block the output temperature TV 2 ('block preset values' = 1 or 'allow' = 0)					
32	Input / Output Temperature TV 3	Temperature TV 3 Absolute value	RWC-TU	[9.1] DPT_Value_Temp	
Reference point of setting and/or reading the threshold value 3.					
33	Input Temperature TV 3	Temperature TV 3 Change (1:+ 0:-)	RWC--	[1.1] DPT_Switch	
Used to increment=1 or decrement=0 the Temp threshold value 3					
34	Input Temperature TV 3	Temperature TV 3 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 149 changes from 0 to 1, (after the measured value is over the threshold)					
35	Input Temperature TV 3	Temperature TV 3 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	

No	Text	Function	Flags	DPT type	Size
Indicating the time period in seconds that should be exceeded before Obj.No. 149 changes from 1 to 0 (after the measured value is under the threshold)					
36	Output Temperature TV 3	Temperature TV 3 Switching output	R-CT-	[1.1] DPT_Switch	
Used to trigger actions if the measured value is above or under (considering the time delays) temperature threshold 3 (On = 1 ; Off = 0)					
37	Input Temperature TV 3	Temperature TV 3 Switch output block	RWC--	[1.1] DPT_Switch	
This is used to lock the output temperature TV 3 ('block preset values' lock = 1 or 'allow' = 0)					
38	Input / Output Temperature TV 4	Temperature TV 4 Absolute value	RWC-TU	[9.1] DPT_Value_Temp	
Reference point of setting and/or reading the threshold value 4.					
39	Input Temperature TV 4	Temperature TV 4 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	
Used to increment=1 or decrement=0 Temp the threshold value 4					
40	Input Temperature TV 4	Temperature TV 4 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 156 changes from 0 to 1, (after the measured value is over the threshold)					
41	Input Temperature TV 4	Temperature TV 4 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 156 changes from 1 to 0, (after the measured value is under the threshold)					
42	Output Temperature TV 4	Temperature TV 4 Switching output	R-CT-	[1.1] DPT_Switch	
Used to trigger actions if the measured value is above or under (considering the time delays) temperature threshold 4 (On = 1 ; Off = 0)					
43	Input Temperature TV 4	Temperature TV 4 Switch output block	RWC--	[1.1] DPT_Switch	
This is used to block the output of temperature TV 4 ('block preset values' = 1 or 'allow' = 0).					
44	Output wind measurement	Wind measurement	R-CT-	[9.5] DPT_Value_Wsp	
Measured value of wind speeds in m/s					
45	Input wind measurement value	Wind measurement value requirement max.	-WC--	[1.17] DPT_Trigger	

No	Text	Function	Flags	DPT type	Size
Request the maximum wind value recorded. Writing a 1 to the communication object triggers the wind sensor to report its maximum measured value to the KNX bus					
46	Output wind measurement	Maximum wind measurement value	R-CT-	[9.5] DPT_Value_Wsp	
Max wind speed measured in m/s					
47	Input wind measurement value	Wind measurement value reset max.	-WC--	[1..17] DPT_Trigger	
Reset Max wind value recorded					
49	Input / Output Wind TV 1	Wind TV 1 Absolute value	RWC-TU	[9.5] DPT_Value_Wsp	
Reference point of setting and/or reading the wind threshold value 1.					
50	Input Wind TV 1	Wind TV 1 Change (1:+ 0: -)	RWC--	[1..1] DPT_Switch	
Used to increment=1 or decrement=0 the wind threshold value 1					
51	Input Wind TV 1	Wind TV 1 Switching delay from 0 to 1	RWC--	[9..10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 365 changes from 0 to 1, (after the measured value is over the threshold)					
52	Input Wind TV 1	Wind TV 1 Switching delay from 1 to 0	RWC--	[9..10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 365 changes from 1 to 0, (after the measured value is under the threshold)					
53	Output Wind TV 1	Wind TV 1 Switching output	R-CT-	[1..1] DPT_Switch	
Used to trigger actions if the measured value is above or under (considering the time delays) wind threshold 1(On = 1 ; Off = 0)					
54	Input Wind TV 1	Wind TV 1 Switch output block	RWC--	[1..1] DPT_Switch	
Used to lock the TV 1 output ('preset values' lock = 1 or allow = 0)					
55	Input / Output Wind TV 2	Wind TV 2 Absolute value	RWC-TU	[9.5] DPT_Value_Wsp	
Reference point of setting and/or reading the wind threshold value 2.					
56	Input Wind TV 2	Wind TV 2 Change (1:+ 0: -)	RWC--	[1..1] DPT_Switch	
Used to increment=1 or decrement=0 the wind threshold value 2					
57	Input Wind TV 2	Wind TV 2 Switching delay from 0 to 1	RWC--	[9..10] DPT_Value_Time1	

No	Text	Function	Flags	DPT type	Size
Indicating the time period in seconds that should be exceeded before Obj.No. 371 changes from 0 to 1, (after the measured value is over the threshold)					
58	Input Wind TV 2	Wind TV 2 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 371 changes from 1 to 0, (after the measured value is under the threshold)					
59	Output Wind TV 2	Wind TV 2 Switching output	R-CT-	[1.1] DPT_Switch	
This is used to trigger actions when the measured value is above or below (taking into account the time delays) the wind speed threshold 2 (On = 1, Off = 0)					
60	Input Wind TV 2	Wind TV 2 Switch output block	RWC--	[1.1] DPT_Switch	
Used to lock the TV 2 output ('Lock preset values' = 1 or 'Allow' = 0)					
61	Input / Output Wind TV 3	Wind TV 3 Absolute value	RWC-TU	[9.5] DPT_Value_Wsp	
Reference point of setting and/or reading the wind threshold value 3.					
62	Input Wind TV 3	Wind TV 3 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	
Used to increment=1 or decrement=0 the wind threshold value 3					
63	Input Wind TV 3	Wind TV 3 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 377 changes from 0 to 1, (after the measured value is over the threshold)					
64	Input Wind TV 3	Wind TV 3 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 377 changes from 1 to 0, (after the measured value is under the threshold)					
65	Output Wind TV 3	Wind TV 3 Switching output	R-CT-	[1.1] DPT_Switch	
This is used to trigger actions when the measured value is above or below (taking into account the time delays) the wind speed threshold 3 (On = 1, Off = 0)					
66	Input Wind TV 3	Wind TV 3 Switch output block	RWC--	[1.1] DPT_Switch	
Used to lock the wind speed TV 3 output ('preset values' lock = 1 or allow = 0)					
67	Output brightness measurement	Brightness measurement	R-CT-	[9.4] DPT_Value_Lux	
Send the highest currently measured value of the five internal Bright. sensors on the bus.					

No	Text	Function	Flags	DPT type	Size
68	Input / Output Brightness TV 1	Brightness TV 1 Absolute value	RWC- TU	[9.4] DPT_Val- ue_Lux	
Reference point of setting and/or reading the bright. threshold value 1.					
69	Input Brightness TV 1	Brightness TV 1 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	
Used to increment=1 or decrement=0 the bright. threshold value 1					
70	Input Brightness TV 1	Brightness TV 1 Switching delay from 0 to 1	RWC--	[9.10] DPT_Val- ue_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 185 changes from 0 to 1, (after the measured value is over the threshold)					
71	Input Brightness TV 1	Brightness TV 1 Switching delay from 1 to 0	RWC--	[9.10] DPT_Val- ue_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 185 changes from 1 to 0, (after the measured value is under the threshold)					
72	Output Brightness TV 1	Brightness TV 1 Switching output	R-CT-	[1.1] DPT_Switch	
Used to trigger actions if the measured value is above or under (considering the time delays) threshold 1(On = 1 ; Off = 0)					
73	Input Brightness TV 1	Brightness TV 1 Switch output block	RWC--	[1.1] DPT_Switch	
Used to lock the output brightness TV 1 ('lock preset values' = 1 or 'allow' = 0)					
74	Input / Output Brightness TV 2	Brightness TV 2 Absolute value	RWC- TU	[9.4] DPT_Val- ue_Lux	
Reference point of setting and/or reading the bright. threshold value 2.					
75	Input Brightness TV 2	Brightness TV 2 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	
Used to increment=1 or decrement=0 the bright. threshold value 2					
76	Input Brightness TV 2	Brightness TV 2 Switching delay from 0 to 1	RWC--	[9.10] DPT_Val- ue_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 192 changes from 0 to 1, (after the measured value is over the threshold)					
77	Input Brightness TV 2	Brightness TV 2 Switching delay from 1 to 0	RWC--	[9.10] DPT_Val- ue_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 192 changes from 1 to 0, (after the measured value is under the threshold)					
78	Output Brightness TV 2	Brightness TV 2 Switching output	R-CT-	[1.1] DPT_Switch	

No	Text	Function	Flags	DPT type	Size
Used to trigger actions if the measured value is above or under (considering the time delays) threshold 2(On = 1 ; Off = 0)					
79	Input Brightness TV 2	Brightness TV 2 Switch output block	RWC--	[1.1] DPT_Switch	
Used to lock the output brightness TV 2 ('preset values' lock = 1 or allow = 0)					
80	Input / Output Brightness TV 3	Brightness TV 3 Absolute value	RWC-TU	[9.4] DPT_Value_Lux	
Reference point of setting and/or reading the bright. threshold value 3.					
81	Input Brightness TV 3	Brightness TV 3 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	
Used to increment=1 or decrement=0 the bright. threshold value 3					
82	Input Brightness TV 3	Brightness TV 3 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 199 changes from 0 to 1, (after the measured value is over the threshold)					
83	Input Brightness TV 3	Brightness TV 3 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 199 changes from 1 to 0, (after the measured value is under the threshold)					
84	Output Brightness TV 3	Brightness TV 3 Switching output	R-CT-	[1.1] DPT_Switch	
Used to trigger actions if the measured value is above or under (considering the time delays) threshold 1(On = 1 ; Off = 0)					
85	Input Brightness TV 3	Brightness TV 3 Switch output block	RWC--	[1.1] DPT_Switch	
Used to block the output brightness TV 3 ('block preset values' block = 1 or allow = 0)					
86	Input / Output Brightness TV 4	Brightness TV 4 Absolute value	RWC-TU	[9.4] DPT_Value_Lux	
Reference point of setting and/or reading the bright. threshold value 4.					
87	Input Brightness TV 4	Brightness TV 4 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	
Used to increment=1 or decrement=0 the bright. threshold value 4					
88	Input Brightness TV 4	Brightness TV 4 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 206 changes from 0 to 1, (after the measured value is over the threshold)					

No	Text	Function	Flags	DPT type	Size
89	Input Brightness TV 4	Brightness TV 4 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 206 changes from 1 to 0, (after the measured value is under the threshold)					
90	Output Brightness TV 4	Brightness TV 4 Switching output	R-CT-	[1.1] DPT_Switch	
Used to trigger actions if the measured value is above or under (considering the time delays) threshold 4(On = 1 ; Off = 0)					
91	Input Brightness TV 4	Brightness TV 4 Switch output block	RWC--	[1.1] DPT_Switch	
Used to lock the output brightness TV 4 (lock 'preset values' = 1 or allow = 0)					
92	Input / Output Twilight TV 1	Twilight TV 1 Absolute value	RWC-TU	[9.4] DPT_Value_Lux	
Reference point of setting and/or reading Twilight threshold value 1.					
93	Input Twilight TV 1	Twilight TV 1 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	
Used to increment=1 or decrement=0 the Twilight threshold value 1					
94	Input Twilight TV 1	Twilight TV 1 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 297 changes from 0 to 1, (after the measured value is over the threshold)					
95	Input Twilight TV 1	Twilight TV 1 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 297 changes from 1 to 0, (after the measured value is under the threshold)					
96	Output Twilight TV 1	Twilight TV 1 Switching output	R-CT-	[1.1] DPT_Switch	
Used to trigger actions if the measured value is above or under (considering the time delays) threshold 1(On = 1 ; Off = 0)					
97	Input Twilight TV 1	Twilight TV 1 Switch output block	RWC--	[1.1] DPT_Switch	
This is used to block the twilight TV 1 output ('preset values' block = 1 or allow = 0)					
98	Input / Output Twilight TV 2	Twilight TV 2 Absolute value	RWC-TU	[9.4] DPT_Value_Lux	
Reference point of setting and/or reading Twilight threshold value 2.					
99	Input Twilight TV 2	Twilight TV 2 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	

No	Text	Function	Flags	DPT type	Size
Used to increment=1 or decrement=0 the Twilight threshold value 2					
100	Input Twilight TV 2	Twilight TV 2 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 304 changes from 0 to 1, (after the measured value is over the threshold)					
101	Input Twilight TV 2	Twilight TV 2 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 304 changes from 1 to 0, (after the measured value is under the threshold)					
102	Output Twilight TV 2	Twilight TV 2 Switching output	R-CT-	[1.1] DPT_Switch	
This is used to trigger actions when the measured value is above or below (taking into account the time delays) the limit value 2 (On = 1, Off = 0)					
103	Input Twilight TV 2	Twilight TV 2 Switch output block	RWC--	[1.1] DPT_Switch	
This is used to block the twilight TV 2 output ('preset values' block = 1 or allow = 0)					
104	Input / Output Twilight TV 3	Twilight TV 3 Absolute value	RWC-TU	[9.4] DPT_Value_Lux	
Reference point of setting and/or reading Twilight threshold value 3.					
105	Input Twilight TV 3	Twilight TV 3 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	
Used to increment=1 or decrement=0 the Twilight threshold value 3					
106	Input Twilight TV 3	Twilight TV 3 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 311 changes from 0 to 1, (after the measured value is over the threshold)					
107	Input Twilight TV 3	Twilight TV 3 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	
Indicating the time period in seconds that should be exceeded before Obj.No. 311 changes from 1 to 0, (after the measured value is under the threshold)					
108	Output Twilight TV 3	Twilight TV 3 Switching output	R-CT-	[1.1] DPT_Switch	
This is used to trigger actions when the measured value is above or below (taking into account the time delays) the limit value 3 (On = 1, Off = 0)					
109	Input Twilight TV 3	Twilight TV 3 Switch output block	RWC--	[1.1] DPT_Switch	

No	Text	Function	Flags	DPT type	Size
This is used to block the twilight TV 3 output ('preset values' block = 1 or allow = 0)					
110	Output sun position	Sun position azimuth [°]	R-CT-	[14.7] DPT_Value_AngleDeg	
Received Value of Sun Azimuth Angle in Degrees (4 bytes floating point)					
111	Output sun position	Sun position elevation [°]	R-CT-	[14.7] DPT_Value_AngleDeg	
Received Value of Sun Elevation Angle in Degrees (4 bytes floating point)					
112	Output sun position	Sun position azimuth [°]	R-CT-	[9.7] DPT_Value_Humidity	
Received Value of Sun Azimuth Angle in Degrees (2 bytes floating point)					
113	Output sun position	Sun position elevation [°]	R-CT-	[9.7] DPT_Value_Humidity	
Received Value of Sun Elevation Angle in Degrees (2 bytes floating point)					
114	Output Façades	Façades Thermal insulation status	R-CT-	[1.1] DPT_Switch	
Status of Heat Protection function. (1= Heat Protection function is active)					
115	Output Façade 1	Façade 1 Status	R-CT-	[1.1] DPT_Switch	
Indicates if Fac.1 channel is activated or not.					
116	Output Façade 1	Façade 1 Movement position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Movement position on the bus to control the actuators of the façade 1.					
117	Output Façade 1	Façade 1 Slat position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Slats position on the bus to control the actuators of the façade 1.					
118	Input Façade 1	Façade 1 Block (1 = blocked)	-WC--	[1.1] DPT_Switch	
If activated = 1 the façade 1 can't be controlled. (Default)					
119	Input Façade 1	Façade 1 Safety (1 = active)	-WC--	[1.1] DPT_Switch	
If the safety object is 1, the Fac.1 can be retracted or retain its position, but all other automatic actions are ignored.					
120	Output Façade 2	Façade 2 Status	R-CT-	[1.1] DPT_Switch	
Indicates if Fac.2 channel is activated or not.					
121	Output Façade 2	Façade 2 Movement position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Movement position on the bus to control the actuators of the façade 2.					
122	Output Façade 2	Façade 2 Slat position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Slats position on the bus to control the actuators of the façade 2.					

No	Text	Function	Flags	DPT type	Size
123	Input Façade 2	Façade 2 Block (1 = blocked)	-WC--	[1.1] DPT_Switch	
If activated = 1 the façade 2 can't be controlled. (Default)					
124	Input Façade 2	Façade 2 Safety (1 = active)	-WC--	[1.1] DPT_Switch	
If the safety object is 1, the Fac.2 can be retracted or retain its position, but all other automatic actions are ignored.					
125	Output Façade 3	Façade 3 Status	R-CT-	[1.1] DPT_Switch	
Indicates if Fac.3 channel is activated or not.					
126	Output Façade 3	Façade 3 Movement position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Movement position on the bus to control the actuators of the façade 3.					
127	Output Façade 3	Façade 3 Slat position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Slats position on the bus to control the actuators of the façade 3.					
128	Input Façade 3	Façade 3 Block (1 = blocked)	-WC--	[1.1] DPT_Switch	
If activated = 1 the façade 3 can't be controlled. (Default)					
129	Input Façade 3	Façade 3 Safety (1 = active)	-WC--	[1.1] DPT_Switch	
If the safety object is 1, the Fac.3 can be retracted or retain its position, but all other automatic actions are ignored.					
130	Output Façade 4	Façade 4 Status	R-CT-	[1.1] DPT_Switch	
Indicates if Fac.4 channel is activated or not.					
131	Output Façade 4	Façade 4 Movement position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Movement position on the bus to control the actuators of the façade 4.					
132	Output Façade 4	Façade 4 Slat position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Slats position on the bus to control the actuators of the façade 4.					
133	Input Façade 4	Façade 4 Block (1 = blocked)	-WC--	[1.1] DPT_Switch	
If activated = 1 the façade 4 can't be controlled. (Default)					
134	Input Façade 4	Façade 4 Safety (1 = active)	-WC--	[1.1] DPT_Switch	
If the safety object is 1, the Fac.4 can be retracted or retain its position, but all other automatic actions are ignored.					
135	Output Façade 5	Façade 5 Status	R-CT-	[1.1] DPT_Switch	

No	Text	Function	Flags	DPT type	Size
Indicates if Fac.5 channel is activated or not.					
136	Output Façade 5	Façade 5 Movement position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Movement position on the bus to control the actuators of the façade 5.					
137	Output Façade 5	Façade 5 Slat position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Slats position on the bus to control the actuators of the façade 5.					
138	Input Façade 5	Façade 5 Block (1 = blocked)	-WC--	[1.1] DPT_Switch	
If activated = 1 the façade 5 can't be controlled. (Default)					
139	Input Façade 5	Façade 5 Safety (1 = active)	-WC--	[1.1] DPT_Switch	
If the safety object is 1, the Fac.5 can be retracted or retain its position, but all other automatic actions are ignored.					
140	Output Façade 6	Façade 6 Status	R-CT-	[1.1] DPT_Switch	
Indicates if Fac.6 channel is activated or not.					
141	Output Façade 6	Façade 6 Movement position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Movement position on the bus to control the actuators of the façade 6.					
142	Output Façade 6	Façade 6 Slat position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Slats position on the bus to control the actuators of the façade 6.					
143	Input Façade 6	Façade 6 Block (1 = blocked)	-WC--	[1.1] DPT_Switch	
If activated = 1 the façade 6 can't be controlled. (Default)					
144	Input Façade 6	Façade 6 Safety (1 = active)	-WC--	[1.1] DPT_Switch	
If the safety object is 1, the Fac.6 can be retracted or retain its position, but all other automatic actions are ignored.					
145	Output Façade 7	Façade 7 Status	R-CT-	[1.1] DPT_Switch	
Indicates if Fac.7 channel is activated or not.					
146	Output Façade 7	Façade 7 Movement position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Movement position on the bus to control the actuators of the façade 7.					
147	Output Façade 7	Façade 7 Slat position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Slats position on the bus to control the actuators of the façade 7.					
148	Input Façade 7	Façade 7 Block (1 = blocked)	-WC--	[1.1] DPT_Switch	

No	Text	Function	Flags	DPT type	Size
If activated = 1 the façade 7 can't be controlled. (Default)					
149	Input Façade 7	Façade 7 Safety (1 = active)	-WC--	[1.1] DPT_Switch	
If the safety object is 1, the Fac.7 can be retracted or retain its position, but all other automatic actions are ignored.					
150	Output Façade 8	Façade 8 Status	R-CT-	[1.1] DPT_Switch	
Indicates if Fac.8 channel is activated or not.					
151	Output Façade 8	Façade 8 Movement position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Movement position on the bus to control the actuators of the façade 8.					
152	Output Façade 8	Façade 8 Slat position [%]	R-CT-	[5.1] DPT_Scaling	
Send the Slats position on the bus to control the actuators of the façade 8.					
153	Input Façade 8	Façade 8 Block (1 = blocked)	-WC--	[1.1] DPT_Switch	
If activated = 1 the façade 8 can't be controlled. (Default)					
154	Input Façade 8	Façade 8 Safety (1 = active)	-WC--	[1.1] DPT_Switch	
If the safety object is 1, the Fac.8 can be retracted or retain its position, but all other automatic actions are ignored.					
155	Output Calendar time switch Period 1, Seq. 1	Calendar time switch Period 1, Seq. 1 Switching output	R-CT-	[1.1] DPT_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).					
156	Output Calendar time switch Period 1, Seq. 2	Calendar time switch Period 1, Seq. 2 Switching output	R-CT-	[1.1] DPT_Switch	
If the CTP 1 Seq 2 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).					
157	Output Calendar time switch Period 2, Seq. 1	Calendar time switch Period 2, Seq. 1 Switching output	R-CT-	[1.1] DPT_Switch	
If the CTP 2 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).					

No	Text	Function	Flags	DPT type	Size
158	Output Calendar time switch Period 2, Seq. 2	Calendar time switch Period 2, Seq. 2 Switching output	R-CT-	[1.1] DPT_Switch	
If the CTP 2 Seq 2 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).					
159	Output Calendar time switch Period 3, Seq. 1	Calendar time switch Period 3, Seq. 1 Switching output	R-CT-	[1.1] DPT_Switch	
CTP 3 Seq 1 Switch Off Time : Hours: 0 to 23 / Minutes: 0 to 59.					
160	Output Calendar time switch Period 3, Seq. 2	Calendar time switch Period 3, Seq. 2 Switching output	R-CT-	[1.1] DPT_Switch	
If the CTP 3 Seq 2 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).					
161	Output Weekly time switch Monday 1	Weekly time switch Monday 1 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Monday Seq.1 is active & Value is Low(0) when Monday Seq.1 is inactive .					
162	Output Weekly time switch Monday 2	Weekly time switch Monday 2 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Monday Seq. 2 is active & Value is Low(0) when Monday Seq. 2 is inactive .					
163	Output Weekly time switch Monday 3	Weekly time switch Monday 3 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Monday Seq. 3 is active & Value is Low(0) when Monday Seq. 3 is inactive .					
164	Output Weekly time switch Monday 4	Weekly time switch Monday 4 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Monday Seq. 4 is active & Value is Low(0) when Monday Seq. 4 is inactive .					
165	Output Weekly time switch Tuesday 1	Weekly time switch Tuesday 1 Switching output	R-CT-	[1.1] DPT_Switch	

No	Text	Function	Flags	DPT type	Size
Value is High(1) when Tuesday Seq. 1 is active & Value is Low(0) when Tuesday Seq. 1 is inactive .					
166	Output Weekly time switch Tuesday 2	Weekly time switch Tuesday 2 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Tuesday Seq. 2 is active & Value is Low(0) when Tuesday Seq. 2 is inactive .					
167	Output Weekly time switch Tuesday 3	Weekly time switch Tuesday 3 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Tuesday Seq. 3 is active & Value is Low(0) when Tuesday Seq. 3 is inactive .					
168	Output Weekly time switch Tuesday 4	Weekly time switch Tuesday 4 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Tuesday Seq. 4 is active & Value is Low(0) when Tuesday Seq. 4 is inactive .					
169	Output Weekly time switch Wednesday 1	Weekly time switch Wednesday 1 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Wednesday Seq. 1 is active & Value is Low(0) when Wednesday Seq. 1 is inactive .					
170	Output Weekly time switch Wednesday 2	Weekly time switch Wednesday 2 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Wednesday Seq. 2 is active & Value is Low(0) when Wednesday Seq. 2 is inactive .					
171	Output Weekly time switch Wednesday 3	Weekly time switch Wednesday 3 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Wednesday Seq. 3 is active & Value is Low(0) when Wednesday Seq. 3 is inactive .					
172	Output Weekly time switch Wednesday 4	Weekly time switch Wednesday 4 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Wednesday Seq. 4 is active & Value is Low(0) when Wednesday Seq. 4 is inactive .					

No	Text	Function	Flags	DPT type	Size
173	Output Weekly time switch Thursday 1	Weekly time switch Thursday 1 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Thursday Seq. 1 is active & Value is Low(0) when Thursday Seq. 1 is inactive .					
174	Output Weekly time switch Thursday 2	Weekly time switch Thursday 2 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Thursday Seq. 2 is active & Value is Low(0) when Thursday Seq. 2 is inactive .					
175	Output Weekly time switch Thursday 3	Weekly time switch Thursday 3 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Thursday Seq. 3 is active & Value is Low(0) when Thursday Seq. 3 is inactive .					
176	Output Weekly time switch Thursday 4	Weekly time switch Thursday 4 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Thursday Seq. 4 is active & Value is Low(0) when Thursday Seq. 4 is inactive .					
177	Output Weekly time switch Friday 1	Weekly time switch Friday 1 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Friday Seq. 1 is active & Value is Low(0) when Friday Seq. 1 is inactive .					
178	Output Weekly time switch Friday 2	Weekly time switch Friday 2 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Friday Seq. 2 is active & Value is Low(0) when Friday Seq. 2 is inactive .					
179	Output Weekly time switch Friday 3	Weekly time switch Friday 3 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Friday Seq. 3 is active & Value is Low(0) when Friday Seq. 3 is inactive .					
180	Output Weekly time switch Friday 4	Weekly time switch Friday 4 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Friday Seq. 4 is active & Value is Low(0) when Friday Seq. 4 is inactive .					
181	Output Weekly time switch Saturday 1	Weekly time switch Saturday 1 Switching output	R-CT-	[1.1] DPT_Switch	

No	Text	Function	Flags	DPT type	Size
Value is High(1) when Saturday Seq. 1 is active & Value is Low(0) when Saturday Seq. 1 is inactive .					
182	Output Weekly time switch Saturday 2	Weekly time switch Saturday 2 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Saturday Seq. 2 is active & Value is Low(0) when Saturday Seq. 2 is inactive .					
183	Output Weekly time switch Saturday 3	Weekly time switch Saturday 3 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Saturday Seq. 3 is active & Value is Low(0) when Saturday Seq. 3 is inactive .					
184	Output Weekly time switch Saturday 4	Weekly time switch Saturday 4 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Saturday Seq. 4 is active & Value is Low(0) when Saturday Seq. 4 is inactive .					
185	Output Weekly time switch Sunday 1	Weekly time switch Sunday 1 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Sunday Seq. 1 is active & Value is Low(0) when Sunday Seq. 1 is inactive .					
186	Output Weekly time switch Sunday 2	Weekly time switch Sunday 2 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Sunday Seq. 2 is active & Value is Low(0) when Sunday Seq. 2 is inactive .					
187	Output Weekly time switch Sunday 3	Weekly time switch Sunday 3 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Sunday Seq. 3 is active & Value is Low(0) when Sunday Seq. 3 is inactive .					
188	Output Weekly time switch Sunday 4	Weekly time switch Sunday 4 Switching output	R-CT-	[1.1] DPT_Switch	
Value is High(1) when Sunday Seq. 4 is active & Value is Low(0) when Sunday Seq. 4 is inactive .					
189	Input logic input 1	Logic input 1	-WC--	[1.1] DPT_Switch	
Logical input 1 of type bit to be used in logical funtions.					
190	Input logic input 2	Logic input 2	-WC--	[1.1] DPT_Switch	
Logical input 2 of type bit to be used in logical funtions.					

No	Text	Function	Flags	DPT type	Size
191	Input logic input 3	Logic input 3	-WC--	[1.1] DPT_Switch	
Logical input 3 of type bit to be used in logical funtions.					
192	Input logic input 4	Logic input 4	-WC--	[1.1] DPT_Switch	
Logical input 4 of type bit to be used in logical funtions.					
193	Input logic input 5	Logic input 5	-WC--	[1.1] DPT_Switch	
Logical input 5 of type bit to be used in logical funtions.					
194	Input logic input 6	Logic input 6	-WC--	[1.1] DPT_Switch	
Logical input 6 of type bit to be used in logical funtions.					
195	Input logic input 7	Logic input 7	-WC--	[1.1] DPT_Switch	
Logical input 7 of type bit to be used in logical funtions.					
196	Input logic input 8	Logic input 8	-WC--	[1.1] DPT_Switch	
Logical input 8 of type bit to be used in logical funtions.					
197	Input logic input 9	Logic input 9	-WC--	[1.1] DPT_Switch	
Logical input 9 of type bit to be used in logical funtions.					
198	Input logic input 10	Logic input 10	-WC--	[1.1] DPT_Switch	
Logical input 10 of type bit to be used in logical funtions.					
199	Input logic input 11	Logic input 11	-WC--	[1.1] DPT_Switch	
Logical input 11 of type bit to be used in logical funtions.					
200	Input logic input 12	Logic input 12	-WC--	[1.1] DPT_Switch	
Logical input 12 of type bit to be used in logical funtions.					
201	Input logic input 13	Logic input 13	-WC--	[1.1] DPT_Switch	
Logical input 13 of type bit to be used in logical funtions.					
202	Input logic input 14	Logic input 14	-WC--	[1.1] DPT_Switch	
Logical input 14 of type bit to be used in logical funtions.					
203	Input logic input 15	Logic input 15	-WC--	[1.1] DPT_Switch	
Logical input 15 of type bit to be used in logical funtions.					
204	Input logic input 16	Logic input 16	-WC--	[1.1] DPT_Switch	

No	Text	Function	Flags	DPT type	Size
Logical input 16 of type bit to be used in logical funtions.					
205	Output AND logic 1	AND logic 1 1 bit switching output	R-CT-	[1.1] DPT_Switch	
Output of And Logic 1 according to 4 available inputs.					
206	Output AND logic 1	AND logic 1 8 bit output A	R-CT-	[5.10] DPT_Val-ue_1_Ucount	
Output A of And Logic 1 (1Byte Value set in the parameters)					
207	Output AND logic 1	AND logic 1 8 bit output B	R-CT-	[5.10] DPT_Val-ue_1_Ucount	
Output B of And Logic 1 (1Byte Value set in the parameters)					
208	Input AND logic 1	AND logic 1 Out-put block	-WC--	[1.1] DPT_Switch	
Used to block the output of And Logic 1 (1 = block & 0 = released). Default					
209	Output AND logic 2	AND logic 2 1 bit switching output	R-CT-	[1.1] DPT_Switch	
Output of And Logic 2 according to 4 available inputs.					
210	Output AND logic 2	AND logic 2 8 bit output A	R-CT-	[5.10] DPT_Val-ue_1_Ucount	
Output A of And Logic 2 (1Byte Value set in the parameters)					
211	Output AND logic 2	AND logic 2 8 bit output B	R-CT-	[5.10] DPT_Val-ue_1_Ucount	
Output B of And Logic 2 (1Byte Value set in the parameters)					
212	Input AND Logic 2	AND Logic 2 Out-put block	-WC--	[1.1] DPT_Switch	
Used to block the output of And Logic 2 (1 = block & 0 = released). Default					
213	Output AND logic 3	AND logic 3 1 bit switching output	R-CT-	[1.1] DPT_Switch	
Output of And Logic 3 according to 4 available inputs.					
214	Output AND logic 3	AND logic 3 8 bit output A	R-CT-	[5.10] DPT_Val-ue_1_Ucount	
Output A of And Logic 3 (1Byte Value set in the parameters)					
215	Output AND logic 3	AND logic 3 8 bit output B	R-CT-	[5.10] DPT_Val-ue_1_Ucount	
Output B of And Logic 3 (1Byte Value set in the parameters)					
216	Input AND Logic 3	AND Logic 3 Out-put block	-WC--	[1.1] DPT_Switch	
Used to block the output of And Logic 3 (1 = block & 0 = released). Default					
217	Output AND logic 4	AND logic 4 1 bit switching output	R-CT-	[1.1] DPT_Switch	
Output of And Logic 4 according to 4 available inputs.					

No	Text	Function	Flags	DPT type	Size
218	Output AND logic 4	AND logic 4 8 bit output A	R-CT-	[5.10] DPT_Val-ue_1_Ucount	
Output A of And Logic 4 (1Byte Value set in the parameters)					
219	Output AND logic 4	AND logic 4 8 bit output B	R-CT-	[5.10] DPT_Val-ue_1_Ucount	
Output B of And Logic 4 (1Byte Value set in the parameters)					
220	Input AND Logic 4	AND Logic 4 Out-put block	-WC--	[1.1] DPT_Switch	
Used to block the output of And Logic 4 (1 = block & 0 = released). Default					
221	Output AND logic 5	AND logic 5 1 bit switching output	R-CT-	[1.1] DPT_Switch	
Output of And Logic 5 according to 4 available inputs.					
222	Output AND logic 5	AND logic 5 8 bit output A	R-CT-	[5.10] DPT_Val-ue_1_Ucount	
Output A of And Logic 5 (1Byte Value set in the parameters)					
223	Output AND logic 5	AND logic 5 8 bit output B	R-CT-	[5.10] DPT_Val-ue_1_Ucount	
Output B of And Logic 5 (1Byte Value set in the parameters)					
224	Input AND Logic 5	AND Logic 5 Out-put block	-WC--	[1.1] DPT_Switch	
Used to block the output of And Logic 5 (1 = block & 0 = released). Default					
225	Output AND logic 6	AND logic 6 1 bit switching output	R-CT-	[1.1] DPT_Switch	
Output of And Logic 6 according to 4 available inputs.					
226	Output AND logic 6	AND logic 6 8 bit output A	R-CT-	[5.10] DPT_Val-ue_1_Ucount	
Output A of And Logic 6 (1Byte Value set in the parameters)					
227	Output AND logic 6	AND logic 6 8 bit output B	R-CT-	[5.10] DPT_Val-ue_1_Ucount	
Output B of And Logic 6 (1Byte Value set in the parameters)					
228	Input AND Logic 6	AND Logic 6 Out-put block	-WC--	[1.1] DPT_Switch	
Used to block the output of And Logic 6 (1 = block & 0 = released). Default					
229	Output OR logic 1	OR logic 1 1 bit switching output	R-CT-	[1.1] DPT_Switch	
Output of OR Logic 1 according to 4 available inputs.					
230	Output OR logic 1	OR logic 1 8 bit output A	R-CT-	[5.10] DPT_Val-ue_1_Ucount	
Output A of OR Logic 1 (1Byte Value set in the parameters)					
231	Output OR logic 1	OR logic 1 8 bit output B	R-CT-	[5.10] DPT_Val-ue_1_Ucount	

No	Text	Function	Flags	DPT type	Size
Output A of OR Logic 1 (1Byte Value set in the parameters)					
232	Input OR logic 1	OR logic 1 Output block	-WC--	[1.1] DPT_Switch	
Used to block the output of OR Logic 1 (1 = block & 0 = released). Default					
233	Output OR logic 2	OR logic 2 1 bit switching output	R-CT-	[1.1] DPT_Switch	
Output of OR Logic 2 according to 4 available inputs.					
234	Output OR logic 2	OR logic 2 8 bit output A	R-CT-	[5..10] DPT_Value_1_Ucount	
Output A of OR Logic 2 (1Byte Value set in the parameters)					
235	Output OR logic 2	OR logic 2 8 bit output B	R-CT-	[5..10] DPT_Value_1_Ucount	
Output A of OR Logic 2 (1Byte Value set in the parameters)					
236	Input OR Logic 2	OR Logic 2 Output block	-WC--	[1.1] DPT_Switch	
Used to block the output of OR Logic 2 (1 = block & 0 = released). Default					
237	Output OR logic 3	OR logic 3 1 bit switching output	R-CT-	[1.1] DPT_Switch	
Output of OR Logic 3 according to 4 available inputs.					
238	Output OR logic 3	OR logic 3 8 bit output A	R-CT-	[5..10] DPT_Value_1_Ucount	
Output A of OR Logic 3 (1Byte Value set in the parameters)					
239	Output OR logic 3	OR logic 3 8 bit output B	R-CT-	[5..10] DPT_Value_1_Ucount	
Output A of OR Logic 3 (1Byte Value set in the parameters)					
240	Input OR Logic 3	OR Logic 3 Output block	-WC--	[1.1] DPT_Switch	
Used to block the output of OR Logic 3 (1 = block & 0 = released). Default					
241	Output OR logic 4	OR logic 4 1 bit switching output	R-CT-	[1.1] DPT_Switch	
Output of OR Logic 4 according to 4 available inputs.					
242	Output OR logic 4	OR logic 4 8 bit output A	R-CT-	[5..10] DPT_Value_1_Ucount	
Output A of OR Logic 4 (1Byte Value set in the parameters)					
243	Output OR logic 4	OR logic 4 8 bit output B	R-CT-	[5..10] DPT_Value_1_Ucount	
Output A of OR Logic 4 (1Byte Value set in the parameters)					
244	Input OR Logic 4	OR Logic 4 Output block	-WC--	[1.1] DPT_Switch	
Used to block the output of OR Logic 4 (1 = block & 0 = released). Default					

No	Text	Function	Flags	DPT type	Size
245	Output OR logic 5	OR logic 5 1 bit switching output	R-CT-	[1.1] DPT_Switch	
Output of OR Logic 5 according to 4 available inputs.					
246	Output OR logic 5	OR logic 5 8 bit output A	R-CT-	[5.10] DPT_Value_1_Ucount	
Output A of OR Logic 5 (1Byte Value set in the parameters)					
247	Output OR logic 5	OR logic 5 8 bit output B	R-CT-	[5.10] DPT_Value_1_Ucount	
Output A of OR Logic 5 (1Byte Value set in the parameters)					
248	Input OR Logic 5	OR Logic 5 Output block	-WC--	[1.1] DPT_Switch	
Used to block the output of OR Logic 5 (1 = block & 0 = released). Default					
249	Output OR logic 6	OR logic 6 1 bit switching output	R-CT-	[1.1] DPT_Switch	
Output of OR Logic 6 according to 4 available inputs.					
250	Output OR logic 6	OR logic 6 8 bit output A	R-CT-	[5.10] DPT_Value_1_Ucount	
Output A of OR Logic 6 (1Byte Value set in the parameters)					
251	Output OR logic 6	OR logic 6 8 bit output B	R-CT-	[5.10] DPT_Value_1_Ucount	
Output A of OR Logic 6 (1Byte Value set in the parameters)					
252	Input OR Logic 6	OR Logic 6 Output block	-WC--	[1.1] DPT_Switch	
Used to block the output of OR Logic 6 (1 = block & 0 = released). Default					
253	Output software version	Software version	R-CT-	[217.1] DPT_Version	
Read the Software Version using this Object.					

4.2. List of all communications objects (Windancer KNX)

Abbreviations Flags:

C Communication

R Read

W Write

T Transfer

U Update

For communication objects 0, 7-66 and 189-253 See "List of all communications objects (Windancer KNX-GPS)" on page 8.

No	Text	Function	Flags	DPT type	Size
67	Output brightness measurement	Brightness measurement East	R-CT-	[9.4] DPT_Value_Lux	2 Bytes
Light level reading East in Lux					
68	Output brightness measurement	Brightness measurement South	R-CT-	[9.4] DPT_Value_Lux	2 Bytes
Light level reading South in Lux					
69	Output brightness measurement	Brightness measurement West	R-CT-	[9.4] DPT_Value_Lux	2 Bytes
Light level reading West in Lux					
75	Input / Output Brightness East TV 1	Brightness East TV 1 Absolute value	RWC-TU	[9.4] DPT_Value_Lux	2 Bytes
Reference point for setting and/or reading the brightness limit 1 East					
76	Input Brightness East TV 1	Brightness East TV 1 Change (1:+ 0:-)	RWC--	[1.1] DPT_Switch	1 Bit
To increase = 1 or decrease = 0 the brightness threshold 1 East					
77	Input Brightness East TV 1	Brightness East TV 1 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	2 Bytes
Specifies the time in seconds that should not elapse before object no. 79 changes from 0 to 1 (after the measured value is above the limit)					
78	Input Brightness East TV 1	Brightness East TV 1 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	2 Bytes
Specifies the time in seconds that should not elapse before object no. 79 changes from 1 to 0 (after the measured value is below the limit)					
79	Output Brightness East TV 1	Brightness East TV 1 Switching output	R-CT-	[1.1] DPT_Switch	1 Bit
Used to trigger actions when the measured value is above or below (taking into account the time delays) the brightness threshold 1 East (On = 1, Off = 0).					
80	Input Brightness East TV 1	Brightness East TV 1 Switch output block	RWC--	[1.1] DPT_Switch	1 Bit
Used to block the output East TV 1 ('Lock preset values' = 1 or 'Allow' = 0)					
81	Input / Output Brightness East TV 2	Brightness East TV 2 Absolute value	RWC-TU	[9.4] DPT_Value_Lux	2 Bytes
Reference point for setting and/or reading brightness threshold 2 East					

No	Text	Function	Flags	DPT type	Size
82	Input Brightness East TV 2	Brightness East TV 2 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	1 Bit
To increase=1 or decrease=0 the brightness threshold 2 East					
83	Input Brightness East TV 2	Brightness East TV 2 Switching delay from 0 to 1	RWC--	[9.10] DPT_Val-ue_Time1	2 Bytes
Specifies the time in seconds that should not be exceeded before object no. 85 changes from 0 to 1 (after the measured value is above the threshold)					
84	Input Brightness East TV 2	Brightness East TV 2 Switching delay from 1 to 0	RWC--	[9.10] DPT_Val-ue_Time1	2 Bytes
Time period in seconds that should not be exceeded before object no. 85 changes from 1 to 0 (after the measured value is below the limit value)					
85	Output Brightness East TV 2	Brightness East TV 2 Switching output	R-CT-	[1.1] DPT_Switch	1 Bit
Used to trigger actions when the measured value is above or below (taking into account the time delays) the brightness limit value 2 East (On = 1, Off = 0).					
86	Input Brightness East TV 2	Brightness East TV 2 Switch output block	RWC--	[1.1] DPT_Switch	1 Bit
Used to lock the East TV2 output ('preset values' lock = 1 or authorise = 0)					
87	Input / Output Brightness East TV 3	Brightness East TV 3 Absolute value	RWC-TU	[9.4] DPT_Val-ue_Lux	2 Bytes
Reference point for setting and/or reading brightness threshold 3 East					
88	Input Brightness East TV 3	Brightness East TV 3 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	1 Bit
Increase=1 or decrease=0 brightness threshold 3 East					
89	Input Brightness East TV 3	Brightness East TV 3 Switching delay from 0 to 1	RWC--	[9.10] DPT_Val-ue_Time1	2 Bytes
Specify the time in seconds that should not be exceeded before object no. 91 changes from 0 to 1 (after the measured value is above the limit)					
90	Input Brightness East TV 3	Brightness East TV 3 Switching delay from 1 to 0	RWC--	[9.10] DPT_Val-ue_Time1	2 Bytes
Specify the time in seconds that should not be exceeded before object no. 91 changes from 1 to 0 (after the measured value is below the limit)					

No	Text	Function	Flags	DPT type	Size
91	Output Brightness East TV 3	Brightness East TV 3 Switching output	R-CT-	[1.1] DPT_Switch	1 Bit
Used to trigger actions when the measured value is above or below (taking into account the time delays) the brightness threshold 3 East (On = 1, Off = 0).					
92	Input Brightness East TV 3	Brightness East TV 3 Switch output block	RWC--	[1.1] DPT_Switch	1 Bit
Used to lock the East TV 3 output ('Lock preset values' lock = 1 or allow = 0)					
93	Input / Output Brightness South TV 1	Brightness South TV 1 Absolute value	RWC-TU	[9.4] DPT_Value_Lux	2 Bytes
Reference point for setting and/or reading brightness threshold 1 South					
94	Input Brightness South TV 1	Brightness South TV 1 Change (1:+ 0:-)	RWC--	[1.1] DPT_Switch	1 Bit
Increase=1 or decrease=0 the brightness threshold 1 South					
95	Input Brightness South TV 1	Brightness South TV 1 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	2 Bytes
Specify the time in seconds that should not be exceeded before object no. 97 changes from 0 to 1 (after the measured value is above the threshold)					
96	Input Brightness South TV 1	Brightness South TV 1 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	2 Bytes
Specifies the time period in seconds that should not be exceeded before object no. 97 then changes from 1 to 0 (after the measured value is below the limit value)					
97	Output Brightness South TV 1	Brightness South TV 1 Switching output	R-CT-	[1.1] DPT_Switch	1 Bit
Used to trigger actions when the measured value is above or below (taking into account the time delays) the brightness limit value 1 South (On = 1, Off = 0).					
98	Input Brightness South TV 1	Brightness South TV 1 Switch output block	RWC--	[1.1] DPT_Switch	1 Bit
Used to lock the South TV 1 output ('preset values' lock = 1 or authorise = 0)					
99	Input / Output Brightness South TV 2	Brightness South TV 2 Absolute value	RWC-TU	[9.4] DPT_Value_Lux	2 Bytes
Reference point for setting and/or reading brightness threshold 2 South					

No	Text	Function	Flags	DPT type	Size
100	Input Brightness South TV 2	Brightness South TV 2 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	1 Bit
Increase=1 or decrease=0 the brightness threshold 2 South					
101	Input Brightness South TV 2	Brightness South TV 2 Switching delay from 0 to 1	RWC--	[9.10] DPT_Val-ue_Time1	2 Bytes
Specify the time in seconds that should not be exceeded before object no. 103 changes from 0 to 1 (after the measured value is above the limit)					
102	Input Brightness South TV 2	Brightness South TV 2 Switching delay from 1 to 0	RWC--	[9.10] DPT_Val-ue_Time1	2 Bytes
Specify the time in seconds that should not be exceeded before object no. 103 changes from 1 to 0 (after the measured value is below the limit)					
103	Output Brightness South TV 2	Brightness South TV 2 Switching output	R-CT-	[1.1] DPT_Switch	1 Bit
Used to trigger actions when the measured value is above or below (taking into account the time delays) the brightness threshold 2 South (On = 1, Off = 0).					
104	Input Brightness South TV 2	Brightness South TV 2 Switch out-put block	RWC--	[1.1] DPT_Switch	1 Bit
Used to block the output South TV 2 ('block preset values' block = 1 or allow = 0)					
105	Input / Output Brightness South TV 3	Brightness South TV 3 Absolute val-ue	RWC-TU	[9.4] DPT_Val-ue_Lux	2 Bytes
Reference point for setting and/or reading brightness threshold 3 South					
106	Input Brightness South TV 3	Brightness South TV 3 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	1 Bit
Increase=1 or decrease=0 the brightness threshold 3 South					
107	Input Brightness South TV 3	Brightness South TV 3 Switching delay from 0 to 1	RWC--	[9.10] DPT_Val-ue_Time1	2 Bytes
Specify the time in seconds that should not be exceeded before object no. 109 changes from 0 to 1 (after the measured value is above the threshold)					
108	Input Brightness South TV 3	Brightness South TV 3 Switching delay from 1 to 0	RWC--	[9.10] DPT_Val-ue_Time1	2 Bytes
Specifies the time period in seconds that should not be exceeded before object no. 109 then changes from 1 to 0 (after the measured value is below the limit value)					

No	Text	Function	Flags	DPT type	Size
109	Output Brightness South TV 3	Brightness South TV 3 Switching output	R-CT-	[1.1] DPT_Switch	1 Bit
Used to trigger actions when the measured value is above or below (taking into account the time delays) the brightness limit value 3 South (On = 1, Off = 0).					
110	Input Brightness South TV 3	Brightness South TV 3 Switch output block	RWC--	[1.1] DPT_Switch	1 Bit
Used to lock the South TV 3 output ('preset values' lock = 1 or authorise = 0)					
111	Input / Output Brightness West TV 1	Brightness West TV 1 Absolute value	RWC-TU	[9.4] DPT_Value_Lux	2 Bytes
Reference point for setting and/or reading brightness threshold 1 West					
112	Input Brightness West TV 1	Brightness West TV 1 Change (1:+ 0:-)	RWC--	[1.1] DPT_Switch	1 Bit
Increase=1 or decrease=0 the brightness threshold 1 West					
113	Input Brightness West TV 1	Brightness West TV 1 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	2 Bytes
Specify the time in seconds that should not be exceeded before object no. 115 changes from 0 to 1 (after the measured value is above the limit)					
114	Input Brightness West TV 1	Brightness West TV 1 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	2 Bytes
Specify the time in seconds that should not be exceeded before object no. 115 changes from 1 to 0 (after the measured value is below the limit)					
115	Output Brightness West TV 1	Brightness West TV 1 Switching output	R-CT-	[1.1] DPT_Switch	1 Bit
Used to trigger actions when the measured value is above or below (taking into account the time delays) the brightness threshold 1 West (On = 1, Off = 0).					
116	Input Brightness West TV 1	Brightness West TV 1 Switch output block	RWC--	[1.1] DPT_Switch	1 Bit
Used to lock the output West TV 1 ('block preset values' = 1 or 'allow' = 0)					
117	Input / Output Brightness West TV 2	Brightness West TV 2 Absolute value	RWC-TU	[9.4] DPT_Value_Lux	2 Bytes
Reference point for setting and/or reading brightness threshold 2 West					

No	Text	Function	Flags	DPT type	Size
118	Input Brightness West TV 2	Brightness West TV 2 Change (1:+ 0:-)	RWC--	[1.1] DPT_Switch	1 Bit
To increase=1 or decrease=0 the brightness threshold 2 West					
119	Input Brightness West TV 2	Brightness West TV 2 Switching delay from 0 to 1	RWC--	[9.10] DPT_Val-ue_Time1	2 Bytes
Specifies the time in seconds that should not be exceeded before object no. 121 changes from 0 to 1 (after the measured value is above the threshold)					
120	Input Brightness West TV 2	Brightness West TV 2 Switching delay from 1 to 0	RWC--	[9.10] DPT_Val-ue_Time1	2 Bytes
Specifies the time period in seconds that should not be exceeded before object no. 121 then changes from 1 to 0 (after the measured value is below the limit value)					
121	Output Brightness West TV 2	Brightness West TV 2 Switching output	R-CT-	[1.1] DPT_Switch	1 Bit
Used to trigger actions when the measured value is above or below (taking into account the time delays) the brightness limit value 2 West (On = 1, Off = 0).					
122	Input Brightness West TV 2	Brightness West TV 2 Switch output block	RWC--	[1.1] DPT_Switch	1 Bit
Used to lock the West TV 2 output ('preset values' block = 1 or authorise = 0)					
123	Input / Output Brightness West TV 3	Brightness West TV 3 Absolute value	RWC-TU	[9.4] DPT_Val-ue_Lux	2 Bytes
Reference point for setting and/or reading brightness threshold 3 West					
124	Input Brightness West TV 3	Brightness West TV 3 Change (1:+ 0:-)	RWC--	[1.1] DPT_Switch	1 Bit
Increase=1 or decrease=0 brightness threshold 3 West					
125	Input Brightness West TV 3	Brightness West TV 3 Switching delay from 0 to 1	RWC--	[9.10] DPT_Val-ue_Time1	2 Bytes
Specify the time in seconds that should not be exceeded before object no. 127 changes from 0 to 1 (after the measured value is above the limit)					
126	Input Brightness West TV 3	Brightness West TV 3 Switching delay from 1 to 0	RWC--	[9.10] DPT_Val-ue_Time1	2 Bytes
Specify the time in seconds that should not be exceeded before object no. 127 changes from 1 to 0 (after the measured value is below the limit)					

No	Text	Function	Flags	DPT type	Size
127	Output Brightness West TV 3	Brightness West TV 3 Switching output	R-CT-	[1.1] DPT_Switch	1 Bit
Used to trigger actions when the measured value is above or below (taking into account the time delays) the brightness threshold TV 3 West (On = 1, Off = 0).					
128	Input Brightness West TV 3	Brightness West TV 3 Switch output block	RWC--	[1.1] DPT_Switch	1 Bit
Used to block the West TV 3 output ('block preset values' = 1 or 'allow' = 0)					
129	Input / Output Twilight TV 1	Twilight TV 1 Absolute value	RWC-TU	[9.4] DPT_Value_Lux	2 Bytes
Reference point for setting and/or reading twilight threshold 1					
130	Input Twilight TV 1	Twilight TV 1 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	1 Bit
Used to raise = 1 or lower = 0 twilight threshold 1					
131	Input Twilight TV 1	Twilight TV 1 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	2 Bytes
Specify the time period in seconds that should not be exceeded before object no. 297 changes from 0 to 1 (after the measured value is above the threshold)					
132	Input Twilight TV 1	Twilight TV 1 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	2 Bytes
Specify the time period in seconds that should not be exceeded before object no. 297 then changes from 1 to 0 (after the measured value is below the limit value)					
133	Output Twilight TV 1	Twilight TV 1 Switching output	R-CT-	[1.1] DPT_Switch	1 Bit
Used to trigger actions when the measured value is above or below (taking into account the time delays) the limit value 1 (On = 1, Off = 0)					
134	Input Twilight TV 1	Twilight TV 1 Switch output block	RWC--	[1.1] DPT_Switch	1 Bit
Used to lock the Twilight TV 1 output ('preset values' block = 1 or allow = 0)					
135	Input / Output Twilight TV 2	Twilight TV 2 Absolute value	RWC-TU	[9.4] DPT_Value_Lux	2 Bytes
Reference point for setting and/or reading the Twilight TV 2 threshold					
136	Input Twilight TV 2	Twilight TV 2 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	1 Bit
Used to raise = 1 or lower = 0 the Twilight TV 2 threshold					

No	Text	Function	Flags	DPT type	Size
137	Input Twilight TV 2	Twilight TV 2 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	2 Bytes
Specify the time period in seconds that should not be exceeded before object no. 304 then changes from 0 to 1 (after the measured value is above the limit)					
138	Input Twilight TV 2	Twilight TV 2 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	2 Bytes
Specify the time period in seconds that should not be exceeded before object no. 304 then changes from 1 to 0 (after the measured value is below the limit)					
139	Output Twilight TV 2	Twilight TV 2 Switching output	R-CT-	[1.1] DPT_Switch	1 Bit
Used to trigger actions when the measured value is above or below (taking into account the time delays) the limit value 2 (On = 1, Off = 0)					
140	Input Twilight TV 2	Twilight TV 2 Switch output block	RWC--	[1.1] DPT_Switch	1 Bit
Used to block the output Twilight TV 2 ('preset values' block = 1 or allow = 0)					
141	Input / Output Twilight TV 3	Twilight TV 3 Absolute value	RWC-TU	[9.4] DPT_Value_Lux	2 Bytes
Reference point for setting and/or reading twilight threshold 3					
142	Input Twilight TV 3	Twilight TV 3 Change (1:+ 0: -)	RWC--	[1.1] DPT_Switch	1 Bit
Used to raise = 1 or lower = 0 twilight threshold 3					
143	Input Twilight TV 3	Twilight TV 3 Switching delay from 0 to 1	RWC--	[9.10] DPT_Value_Time1	2 Bytes
Specify the time period in seconds that should not be exceeded before object no. 311 changes from 0 to 1 (after the measured value is above the threshold)					
144	Input Twilight TV 3	Twilight TV 3 Switching delay from 1 to 0	RWC--	[9.10] DPT_Value_Time1	2 Bytes
Specify the time period in seconds that should not be exceeded before object number 311 then changes from 1 to 0 (after the measured value is below the limit value)					
145	Output Twilight TV 3	Twilight TV 3 Switching output	R-CT-	[1.1] DPT_Switch	1 Bit

No	Text	Function	Flags	DPT type	Size
Used to trigger actions when the measured value is above or below (taking into account the time delays) the limit value 3 (On = 1, Off = 0)					
146	Input Twilight TV 3	Twilight TV 3 Switch output block	RWC--	[1.1] DPT_Switch	1 Bit
Used to lock the Twilight TV 3 output ('preset values' lock)					

5. Setting of the parameters

In general, by sending periodically, the value/status can be sent on the bus even if there is no change.

5.1. Behaviour on power failure/ restoration of power

Behaviour following a failure of the bus power supply:

The device sends nothing.

Behaviour following a failure of the auxiliary power supply:

The "Auxiliary voltage status" object sends according to the parameter setting.

Behaviour on bus restoration of power and following programming or reset:

The device sends all measurement values as well as switching and status according to their send behaviour set in the parameters with the delays fixed in the "General settings" parameter block.

Behaviour following resumption of the auxiliary power supply:

The "Auxiliary voltage status" object sends according to the parameter setting.

5.2. General settings

First set the send delays after power up and programming here.

These delays should be coordinated with the entire KNX-system, i.e. in a KNX system with many participants, care should be taken that the bus is not overloaded after a KNX-bus reset. The messages of the individual participants should be sent offset.

Transmission delays after power-up and programming for:	
Readings	5 s ... 2 h
Threshold values and switching outputs	5 s ... 2 h
Logic outputs	5 s ... 2 h

The bus load is limited with the aid of the maximum message rate. Many messages per second put a strain on the bus, but ensure faster data transmission.

Maximum telegram rate	1 • 2 • 3 • <u>5</u> • 10 • 20 <u>messages per sec.</u>
-----------------------	---

The auxiliary voltage status object indicates whether the auxiliary voltage is connected to the weather station. If the rain sensor is used, then the auxiliary voltage must be connected.

Send object auxiliary voltage status	<ul style="list-style-type: none"> • <u>not send</u> • on change • on change and periodically
--------------------------------------	--

When sending periodically, the object auxiliary voltage status is sent on the bus in a fixed cycle that can be set here.

Send cycle (only if date and time are transmitted "periodically")	5 s ... 2 h; <u>10 s</u>
--	--------------------------

5.3. GPS settings (Windancer KNX-GPS)

The Windancer KNX-GPS weather station has a GPS receiver that provides the date and time, among other things. Since there should only be one message for date/time in a KNX-system (e.g. when using several GPS weather stations), the procedure for dealing with the time signal of the weather station is set here.

If the date and time are set by the GPS signal and not sent, then they are only used internally, e.g. to calculate the position of the sun.

By sending to the bus (periodically or on request), the date and time of the weather station can also be used by other bus participants.

Alternatively, the date and time can be set by communication objects (i.e. from the bus). This setting is useful if another bus participant is to specify the time signal uniformly.

Date and time will be set by	<ul style="list-style-type: none"> • <u>GPS signal and not sent</u> • GPS signal and sent periodically • GPS signal and sent on request • GPS signal and sent on request + periodically sent • Communication objects and not sent
------------------------------	--

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

Send cycle (only if date and time are transmitted "periodically")	5 s ... 2 h; <u>1 min</u>
--	---------------------------

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.

If there is no reception, GPS fault is ... recognised after the last reception	<u>20 min</u> • 30 min • 1 h • 1.5 h • 2 h
After the return of auxiliary voltage it can take up to ten minutes till GPS OK	

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.

GPS fault object sends (1 = Fault 0 = No fault)	<ul style="list-style-type: none"> • <u>not</u> send • 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
--	--

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

Send cycle (is transmitted if "periodically" is selected)	<u>5 s</u> ... 2 h
--	--------------------

If date and time are set by GPS signal:

The current date and time can be set initially via the ETS. The weather station uses this data until the first time a valid GPS signal is received.

If date and time are set by communications object:

Between the transmission of the date and the transmission of the time, no date change may take place; they must be sent to the weather station on the same day.

The date and time must be received within 10 s of each other for the device's internal clock to accept this data as valid.

The weather station 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 communication object has been received for some time. The internal clock of the weather station can show a time drift of up to ± 6 seconds per day.

5.4. Location (Windancer KNX-GPS)

The Windancer KNX-GPS weather station has a GPS receiver that provides the geo-position, among other things. The location is required in order to be able to calculate the **position of the sun** with the help of the date and time. During the initial start-up, the input coordinates are used for as long as no GPS reception exists.

In order to be able to display the **correct time**, the location must also be known. Only in this way can the weather station automatically take into account the UTC offset (difference from world time) and the summer/winter time change-over.

The coordinates of various towns are saved in the weather station:

Country	<ul style="list-style-type: none"> • Another country • Belgium • <u>Germany</u> • France • Greece • Ireland • Italy • Luxembourg • Netherlands 	<ul style="list-style-type: none"> • Norway • Austria • Portugal • Sweden • Switzerland • Spain • Turkey • UK
Location	6 towns in Belgium 41 towns in Germany; <u>Stuttgart</u> 30 towns in France 9 towns in Greece 20 towns in Italy 1 town in Luxembourg 8 towns in the Netherlands 11 towns in Norway 13 towns in Austria 5 towns in Portugal 15 towns in Sweden 12 towns in Switzerland 23 towns in Spain 13 towns in Turkey 21 towns in the UK	

As soon as "another country" or "another location" is selected, the input fields for the exact coordinates appear. For example, enter (40° 43' northern latitude, 74° 0' western longitude) for New York, USA:

Degree of longitude [west -180...+180 east]	<u>0</u>
Minute of longitude [west -59...+59 east]	<u>0</u>
Degree of latitude [south -90...+90 north]	<u>0</u>
Minute of latitude [south -59...+59 north]	<u>0</u>
Rule for summer/winter time switching and UTC offset	<u>0</u> [can be specified manually here]

The summer/winter time change-over takes place automatically when "Time zone definition standard" is selected. If "Time zone definition specific" is selected, the rule for the change-over can be adjusted manually.

Example string: 03257:0200+0100/10257:0200UTC+0100

- **03257** Switchover date winter to summer [03 = month, 25 = day, 7 = weekday (7 ≙ Sunday)]

- **0200** Switchover time winter to summer [02 = hours, 00 = minutes] (standard time = winter time)
- **+0100** Changeover difference [01 = hours, 00 = minutes] (+0000 = no changeover)
- **10257** Switchover date summer to winter [10 = month, 25 = day, 7 = weekday (7 \triangleq Sunday)]
- **0200** Switchover time summer to winter [02 = hours, 00 = minutes] (standard time = winter time)
- **UTC+0100** Time zone [01 = hours, 00 = minutes] (-1200 ... +1400)

Time zone definition	<u>Standard</u> • specific
Summer/winter time change-over on the	ST: Sun. after 25 March WT: Sun. after 25 Oct.
Rule for summer/winter time change-over	0 [can be specified manually here] [Change only possible with "Specific time zone definition"]

The location coordinates can be sent on the KNX-bus if required. Sending on change or periodically is more useful for movable structures, such as mobile homes or ships.

Location coordinates	<ul style="list-style-type: none"> • <u>Do not send</u> • send periodically • send if there is a change • send on change and periodically
----------------------	---

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

On change of <i>(is only transmitted if "on change" is selected)</i>	0.5° • <u>1°</u> • 2° • 5° • 10°
---	----------------------------------

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

Send cycle <i>(is sent only if "periodically" is selected)</i>	5 s ... 2 h; <u>1 min</u>
---	---------------------------

5.5. Rain

If the rain sensor is used, then the auxiliary voltage must be connected. The auxiliary voltage feeds the heating of the rain sensor. Only when the rain sensor is heated, the end of precipitation is detected promptly and false alarms caused by fog or dew are avoided.

Use rain sensor	<u>No</u> • Yes
-----------------	-----------------

The object value is defined for rain.

When it rains the switching output is	<u>1</u> • 0
---------------------------------------	--------------

The delay times in seconds can be defined via objects.

Delays can be set via objects (in seconds)	<u>No</u> • Yes
---	-----------------

With longer switching delays, a short rain shower or a short dry phase are not reported.

Switch delay to rain	<u>none</u> • 5 s ... • 2 h
Switch delay to no rain after it is dry again	<u>5 min</u> • 10 min ... • 2 h

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

Switching output sends	<ul style="list-style-type: none"> • <u>If there is a change</u> • on change to 1 • on change to 0 • on change and periodically • on change to 1 and periodically • 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.

Send cycle (is sent only if "periodically" is selected)	<u>5 s</u> ... 2 h
--	--------------------

The additional rain output is used when 2 rain outputs with different delays are needed.

If, for example, windows and awnings are to be controlled on a façade, they can react differently to rain. For windows, the longer rain delay time would ensure that the motors do not run constantly in changeable weather. The awnings on the same façade would react quickly with the help of the 2nd rain output.

Use rain output 2 with fixed switching delays (this switching output has no delay on rain recognition and 5 minutes delay after it is dry again)	<u>No</u> • Yes
--	-----------------

5.6. Night

Night detection can be activated here if required.

Use night recognition Night will be recognised below 10 Lux.	<u>No</u> • Yes
---	-----------------

Here you can set whether a 1 or 0 is sent to the bus at night.

At night the switching output is	<u>1</u> • 0
----------------------------------	--------------

The delay times in seconds can be defined via objects.

Delays can be set via objects (in seconds)	<u>No</u> • Yes
---	-----------------

Switching delays can be used to compensate for minor brightness fluctuations, e.g. darkening due to clouds at twilight.

Switching delay on night	<u>none</u> • 5 s ... 2 h
Switching delay to non-night	<u>none</u> • 5 s ... 2 h

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

Switching output sends	<ul style="list-style-type: none"> • <u>If there is a change</u> • on change to 1 • on change to 0 • on change and periodically • on change to 1 and periodically • on change to 0 and periodically
------------------------	---

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

Send cycle (is sent only if "periodically" is selected)	<u>5 s</u> ... 2 h
--	--------------------

5.7. Temperature

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.

Offset in 0.1°C	-50... 50; <u>0</u>
-----------------	---------------------

The temperature value can be sent to the bus and further processed there by other participants.

Measurement	<ul style="list-style-type: none"> • <u>Do not send</u> • send periodically • send if there is a change • send on change and periodically
-------------	---

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

On change of (is only transmitted if "on change" is selected)	2% • 5% • <u>10%</u> • 25% • 50%
--	----------------------------------

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

Send cycle (is sent only if "periodically" is selected)	<u>5 s</u> ... 2 h
--	--------------------

The highest (max.) and the lowest (min.) temperature value since programming or a reset can be sent to the bus. The two values can be reset via object no. 18 "Temperature measured value reset min./max."

Use min. and max. values (Values are not retained after reset)	<u>No</u> • Yes
---	-----------------

The "Temperature sensor fault" object is used to monitor the function of the temperature sensor. A 1 is sent in case of a fault, otherwise a 0.

Use object "Temperature sensor malfunction"	<u>No</u> • Yes
---	-----------------

5.7.1. Temperature threshold value 1 / 2 / 3 / 4

The temperature threshold values are used to carry out certain actions when a temperature value is exceeded or not reached.

Use threshold value 1 / 2 / 3 / 4	<u>No</u> • Yes
-----------------------------------	-----------------

Threshold value:

.....

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

Threshold value setpoint using	<u>Parameter</u> • Communication objects
--------------------------------	--

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

Threshold value in 0.1°C increments	-300 ... 800; <u>200</u>
-------------------------------------	--------------------------

Here it is set in which cases **threshold values received by a communication object** should be retained. Please note that 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 Communication, the factory settings must always be used.

The last communicated value should	<ul style="list-style-type: none"> • <u>not send</u> • after restoration of power • after power restoration and programming
------------------------------------	--

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.

Start threshold value in 0.1°C valid until first communication	-300 ... 800; <u>200</u>
--	--------------------------

The type of threshold value change is set here.

Type of threshold value change	<u>Absolute value</u> • Increase/decrease
--------------------------------	---

The step size is selected here.

Step size (only for threshold value change through "Increase / Decrease")	0.1°C • 0.2°C • 0.3°C • 0.4°C • 0.5°C • <u>1°C</u> • 2°C • 3°C • 4°C • 5°C
---	--

With both types of limit setting, the switching distance (hysteresis) is set, which is important for the next parameter.

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 (points 1 and 2 in the next parameter). When the temperature rises, the switching output only reacts when the switching distance falls below the threshold value (points 3 and 4 in the next parameter).

Switching distance of the threshold value in %	0 ... 50; <u>20</u>
--	---------------------

Switching output:

Here it is set which value the output transmits if the threshold value is exceeded or undercut.

When the following conditions apply, the output is (TV = Threshold value) (SD = Switching distance)	<ul style="list-style-type: none"> • $\frac{TV \text{ above} = 1 \mid TV - SD \text{ below} = 0}{TV \text{ above} = 0 \mid TV - SD \text{ below} = 1}$ • $\frac{TV \text{ below} = 1 \mid TV + SD \text{ above} = 0}{TV \text{ below} = 0 \mid TV + SD \text{ above} = 1}$
---	--

Here it is set whether delays can be set via objects.

Delays can be set via objects (in seconds)	<u>No</u> • Yes
--	-----------------

Switching delays ignore short-term temperature fluctuations around the threshold value or threshold value and switching distance for the switching output.

Switching delay from 0 to 1	<u>none</u> • 5 s ... 2 h
Switching delay from 1 to 0	<u>none</u> • 5 s ... 2 h

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

Switching output sends	<ul style="list-style-type: none"> • <u>If there is a change</u> • on change to 1 • on change to 0 • on change and periodically • on change to 1 and periodically • 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.

Send cycle <i>(is sent only if "periodically" is selected)</i>	<u>5 s</u> ... 2 h
---	--------------------

Block:

.....

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

Use switching output block	<u>No</u> • Yes
----------------------------	-----------------

The block can take effect at value 0 or 1, depending on the intended use.

Assessment of the block object	<ul style="list-style-type: none"> • <u>At value 1: block At value 0: release</u> • At value 0: block At value 1: release
--------------------------------	---

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

Blocking object value before first communication	<u>0</u> • 1
--	--------------

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

Switching output behaviour	
On blocking	<ul style="list-style-type: none"> • <u>Do not send message</u> • send 0 • send 1
On release (with 2 second release delay)	[Dependent on the "Switching output sends" setting]

The behaviour of the switching output on release is dependent on the value of the parameter "Switching output sends" (see "Switching output")

Switching output sends on change	do not send message • Status object/s send/s
----------------------------------	---

Switching output sends on change to 1	do not send message • if switching output = 1 → send 1
Switching output sends on change to 0	do not send message • if switching output = 0 → send 0
Switching output sends on change and periodically	Send switching output status
Switching output sends on change to 1 and periodically	if switching output = 1 → send 1
Switching output sends on change to 0 and periodically	if switching output = 0 → send 0

5.8. Wind

The wind measurement value can be sent to the bus and further processed there by other participants.

Measurement	<ul style="list-style-type: none"> • <u>Do not send</u> • send periodically • send if there is a change • send on change and periodically
-------------	---

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

On change of <i>(is only transmitted if "on change" is selected)</i>	2% • 5% • <u>10%</u> • 25% • 50%
---	----------------------------------

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

Send cycle <i>(is sent only if "periodically" is selected)</i>	<u>5 s</u> ... 2 h
---	--------------------

The highest wind measurement value since programming or a reset can be sent to the bus. This value can be reset via object no. 47 "Wind measurement value reset max.

Use maximum value <i>(Values are not retained after reset)</i>	<u>No</u> • Yes
---	-----------------

5.8.1. Wind threshold value 1 / 2 / 3

The wind threshold values are used to carry out certain actions when the wind speed exceeds or falls below a certain value, e.g. protection functions for shades or windows.

Use threshold value 1 / 2 / 3	<u>No</u> • Yes
-------------------------------	-----------------

Each threshold value can be set individually.

Threshold value / start threshold value in 0.1 m/s	1... 350; <u>80</u>
---	---------------------

All other settings corresponding to those of temperature threshold values (see *Temperature threshold value 1 / 2 / 3 / 4*, page 47).

5.9. Brightness

If the shade automation is to be used, a threshold value must be active!

The Windancer KNX weather station has three brightness sensors (east, south and west), each with 3 brightness threshold values.

The Windancer KNX-GPS weather station has three brightness sensors and uses the maximum value of these with 4 brightness threshold values.

Sensor (East / South / West)

.....

The weather station detects the current brightness. This value can be sent to the bus and further processed there by other participants.

In the version with GPS reception, the highest currently measured value of the three internal sensors is used as the brightness value. In the version without GPS reception, the brightness is measured separately from the three directions east, south and west.

Measurement	<ul style="list-style-type: none"> • <u>Do not send</u> • send periodically • send if there is a change • send on change and periodically
-------------	---

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

at and above change in % (is only sent if "on change" is selected)	2% • 5% • <u>10%</u> • 25% • 50%
---	----------------------------------

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

Send cycle (only if "periodically" is sent)	<u>5 s</u> ... 2 h
--	--------------------

5.9.1. Brightness threshold value (East / South / West) 1 / 2 / 3 (/ 4)

The brightness threshold value values are used to perform certain actions when the illuminance exceeds or falls below an illuminance in the kilolux range.

Use threshold value 1 / 2 / 3 (/ 4)	<u>No</u> • Yes
-------------------------------------	-----------------

Each threshold value can be set individually.

Threshold value / start threshold value in klx	1 ... 150; <u>60</u>
--	----------------------

All other settings corresponding to those of temperature threshold values (see *Temperature threshold value 1 / 2 / 3 / 4*, page 47).

5.10. Twilight

5.10.1. Twilight threshold value 1 / 2 / 3

The twilight threshold values are used to perform certain actions when the illuminance exceeds or falls below an illuminance in the lux range.

Use threshold value 1 / 2 / 3	<u>No</u> • Yes
-------------------------------	-----------------

Each threshold value can be set individually.

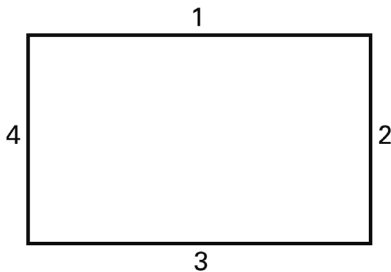
Threshold value / start threshold value in lux	1 ... 1000; <u>200</u>
--	------------------------

All other settings corresponding to those of temperature threshold values (see *Temperature threshold value 1 / 2 / 3 / 4*, page 47).

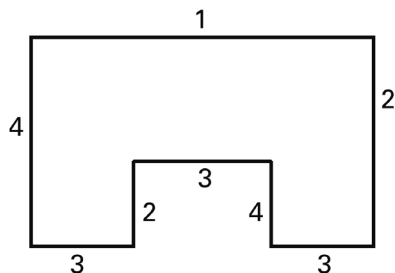
5.11. Shading (Windancer KNX-GPS)

5.11.1. Classifying the façades for the control unit

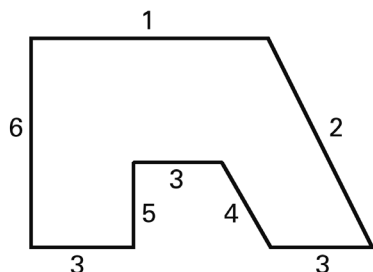
The control options for shadings (shadow edge tracking and slat tracking) are façade-related functions.



Most buildings have 4 façades. In principle, the sun protection of each façade should be controlled separately.



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



In buildings with an asymmetrical layout the façades with a non-right-angled orientation (2, 4) must be controlled separately.

Curved/round fronts should be divided into several façades (segments) to be controlled individually.

If a building has more than 8 façades, another weather station should be used.

Depending on the location, it may make sense to use an additional wind speed sensor from 5 or 6 façades. When there are several buildings, wind measurement should take place separately for each building, as, depending on the positions of the buildings in relation to one another, different wind speeds may occur.

5.12. Shade settings (Windancer KNX-GPS)

The weather station model with GPS receiver calculates the direction (azimuth) and altitude (elevation) of the sun from current time data and position. Sending the sun position is purely informative.

Sun position

- Do not send
- send periodically
- send if there is a change
- send on change and periodically

If the position of the sun changes by the angle set here, the value is sent to the bus.

On change of
(is only transmitted if "on change" is selected)

1 ° ... 15 °

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

Send cycle <i>(is sent only if "periodically" is selected)</i>	5 s ... 2 h; <u>1 min</u>
---	---------------------------

How many façades are used depends on the project requirements, see chapter "Classifying the façades for the control unit" on page 52.

Use façade 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8	<u>No</u> • Yes
--	-----------------

Measures for summer heat protection can be initiated via the heat protection temperature or the object output "Heat protection status" (number 114), e.g. closing roller shutters.

Use heat protection temperature	<u>No</u> • Yes
---------------------------------	------------------------

The appropriate heat insulation temperature depends on the project requirements.

Heat protection temperature in °C	15 ... 50; <u>35</u>
-----------------------------------	----------------------

The switching distance value determines by how many °C the temperature must fall below the threshold value until the heat protection is inactive again.

Switching distance in °C	<u>5</u> ...20
Heat protection is (HPTV = Heat protection threshold value) (SD = Switching distance)	HPTV above = active HPTV - SD below = inactive

Sending only on change or even only on change in one direction (1 = active or 0 = inactive) reduces the load on the bus.

"Façades heat protection status" transmits	<ul style="list-style-type: none"> • <u>If there is a change</u> • on change to 1 • on change to 0 • on change and periodically • on change to 1 and periodically • on change to 0 and periodically
--	---

When sending periodically, the object "Façade heat protection status" is sent on the bus fixed cycle that can be set here.

Send cycle <i>(is sent only if "periodically" is selected)</i>	5 s ... 2 h; <u>1 min</u>
---	---------------------------

5.13. Façade settings (Windancer KNX-GPS)

For each façade, the shade conditions (brightness, position of the sun) and the façade settings (architectural characteristics such as orientation or slat type) can be specified.

Only when these conditions are met is the shading action executed, see chapter "Façade actions (Windancer KNX-GPS)" on page 64.

Shade conditions:

The first condition for shading is that the brightness limit value is exceeded. The threshold value set up accordingly in advance is selected here. For explanations of the brightness threshold value, see chapter "Brightness threshold value (East / South / West) 1 / 2 / 3 (/ 4)" on page 51.

Brightness condition fulfilled if:	
Increased brightness	<u>Brightness threshold value</u> 1 / 2 / 3 / 4

The brightness threshold value is additionally provided with a switching distance, with the help of which smaller brightness fluctuations around the threshold value are filtered out.

Brightness condition not fulfilled if: Reduced brightness Threshold value - switching distance	
Switching distance in % of the threshold value	0 ... 50; <u>20</u>

The sun position condition defines the position of the sun at which shading is to take place. Generally, the sun direction set here should correspond to the orientation of the façade. In addition, the shadows cast by roof overhangs, neighbouring buildings or trees can be taken into account and these angled areas can also be excluded from shading. The aim is to shade only when the façade is in the sun.

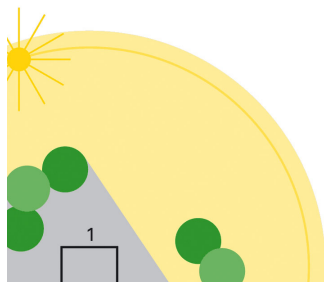
For the direction of the sun (azimuth), predefined angle ranges can be used or an own angle range can be specified numerically.

Sun position condition fulfilled if:	
Sun	<ul style="list-style-type: none"> • from the East (Azimuth 0°...180°) • from the South-east (Azimuth 45°...225°) • <u>from the South (Azimuth 90°...270°)</u> • from the south-west (Azimut 135°...315°) • from the West (Azimuth 180°...360°) • in the range

For numeric setting of the sun's range:

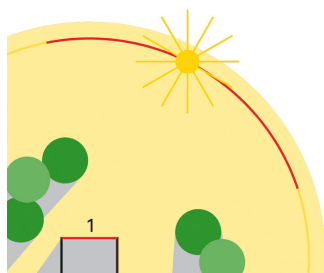
Sun	in the range
Azimuth [°] from	0 ... 360; <u>90</u>
Azimuth [°] to	0 ... 360; <u>270</u>
Elevation [°] from	<u>0</u> ... 90
Elevation [°] to	0 ... <u>90</u>

Azimuth setting example



Top view:

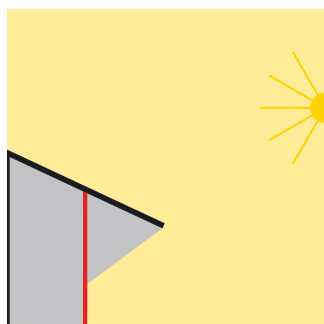
In the morning, for example, the building is fully shaded by surrounding trees.



Top view:

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

Elevation setting example



Side view:

When the sun's position is high, the façade is only shaded by the roof overhang. Shading is only necessary if the sun is low (in the figure approx. below 53°).

Shade settings

.....

The shading can be adjusted according to the position of the sun. See chapter "Using shadow edge tracking and slat tracking" on page 58.

The **shadow edge tracking** is only usable with a sunshade which is moved from the top downwards, such as shutters and blinds, and defines how far the sun may shine into the room. See chapter “Shadow edge tracking” on page 57.

The higher the sun is, the more the blind can be raised without the sun penetrating deeper into the room.

The **slat tracking** is only suitable for slat blinds and, by tilting the slats, ensures that no direct sun but as much daylight as possible enters the room. See chapter “Slat tracking” on page 57.

Type of tracking	<ul style="list-style-type: none"> • <u>No tracking</u> • Shadow edge tracking • Slat auto-guide • Shadow edge tracking and slat auto-guide
------------------	---

5.13.1.Shadow edge tracking

Type of tracking	Shadow edge tracking
------------------	-----------------------------

For the correct calculation of the shadow edge tracking, the compass direction and inclination of the façade must be entered. More in chapter “Orientation and inclination of the façade” on page 60.

Orientation of the façade in ° [North 0°, East 90°, South 180°, West 270°]	0 ... 360; <u>180</u>
Inclination of the façade in ° [0° = no inclination]	-90 ... 90; <u>0</u>

The distance from the floor to the top edge of the window (window height) is required for correct shadow edge tracking.

Window height in cm	1 ... 1000; <u>150</u>
---------------------	------------------------

The maximum penetration depth defines how far the sun may shine into the room as seen from the façade/window area. This can prevent sensitive plants from being exposed to direct sunlight, for example.

Maximum penetration depth of the sun into the room in cm	10 ... 250; <u>50</u>
--	-----------------------

The fineness of the tracking is set by the movement in cm.

From a shadow shift of... cm auto-tracking is performed	1 ... 50; <u>10</u>
--	---------------------

5.13.2.Slat tracking

Type of tracking	Slat tracking
------------------	----------------------

For the correct calculation of the slat tracking, the compass direction and inclination of the façade must be entered. More in chapter “Orientation and inclination of the façade” on page 60.

Orientation of the façade in ° [North 0°, East 90°, South 180°, West 270°]	0 ... 360; <u>180</u>
Inclination of the façade in ° [0° = no inclination]	-90 ... 90; <u>0</u>

The alignment, width and spacing of the slats are required for correct slat tracking. More in chapter “Slat types and determination of width and spacing” on page 60.

Slat orientation	<u>horizontal</u> • vertical
Slat width in mm	1 ... 1000; <u>50</u>
Slat distance in mm	1 ... 1000; <u>50</u>

The fineness of the tracking is set by the minimum angle change.

Minimum angle change in ° for transmitting a new slat position	1 ... 90; <u>10</u>
--	---------------------

The slat angles in the upper stop position (0%) and lower stop position (100%) differ depending on the type of blind. More in chapters “Slat position for horizontal slats” on page 61 and “Slat position for vertical slats” on page 63.

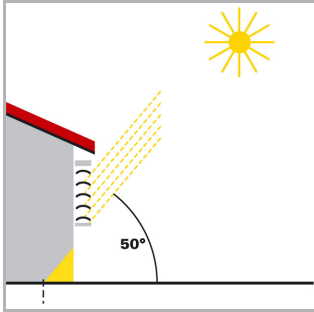
Slat angle in ° after positioning command 0%	0 ... 180; <u>90</u>
Slat angle in ° after positioning command 100%	<u>0</u> ... 180

5.13.3.Using shadow edge tracking and slat tracking

With **shadow edge tracking** the sunshade is not moved down fully; rather it is moved only so far that the sun can still shine a parametrisable distance (e.g. 50 cm) into the room.

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

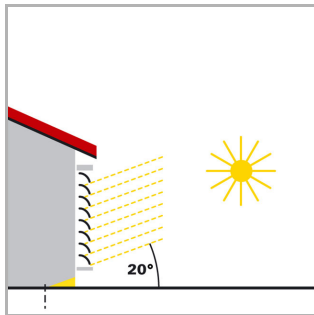
During **slat tracking** the horizontal slats of shutters are not fully closed but rather automatically adjusted according to the position of the sun so that it cannot shine directly into the room. Diffuse daylight can still enter the room through the slats and contribute to dazzle-free room lighting.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



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.

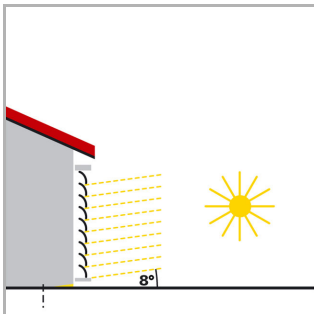
The slats can be set almost vertically without the sun shining directly into the room.



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 cannot shine directly into the room. Despite that, diffuse daylight can still reach the room and so contribute to the room lighting.

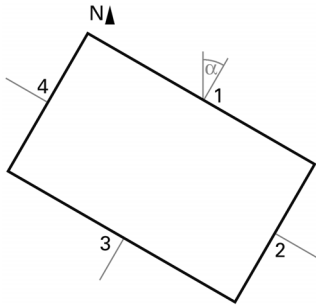


Sunshade when the position of the sun is low

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.

5.13.4. Orientation and inclination of the façade



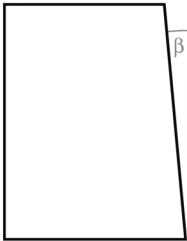
Top view

The façade orientation corresponds to the angle between the North-South axis and the façade vertical. The angle α here is measured in a clockwise direction (North corresponds to 0° , East 90° , South 180° and West 270°).

The façade orientations result as follows:

- Façade 1: α
- Façade 2: $\alpha + 90^\circ$
- Façade 3: $\alpha + 180^\circ$
- Façade 4: $\alpha + 270^\circ$

Example: The building in the illustration is turned $\alpha = 30^\circ$ to the east i.e. the façade alignment is 30° , 120° , 210° and 300°



Side view

If a façade surface is not oriented vertically, this must be taken into account. A forward inclination of the façade is counted as a positive angle; a backwards 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.

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

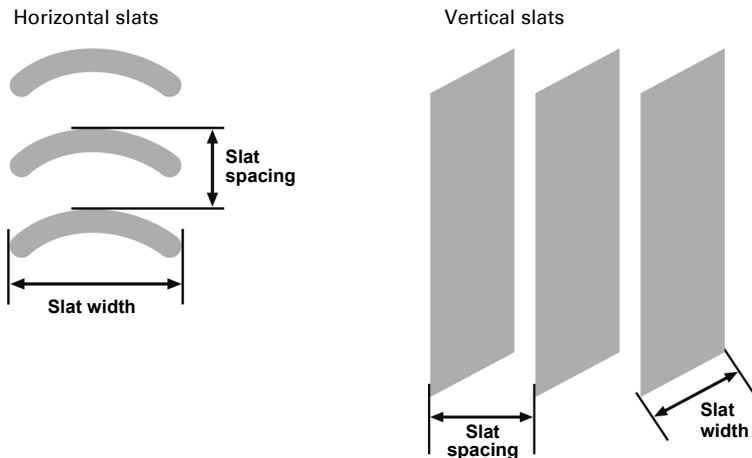
5.13.5. Slat types and determination of width and spacing

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.

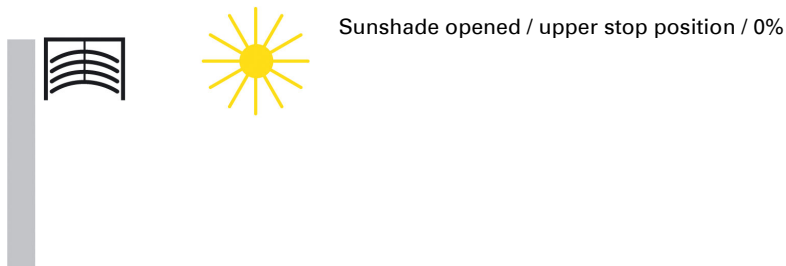
Both types of slat can be adjusted by the weather station so that no direct sunlight falls into the room, but as much diffuse daylight as possible does.

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



5.13.6.Slat position for horizontal slats

For blind drives with 2 limit switches, the upper end position (i.e. sunshade fully open) is controlled via the value 0% or reported as status.



If the lower stop position is to be approached, this is specified to the blinds actuator as sun position "100%" or it will report reaching the lower stop position (i.e. sunshade fully closed) using this value. If blinds are moved down from the upper stop position, the slats first turn into an almost vertical position and the sunshade moves with closed slats to the lower stop position.

If the blinds are in the lower end position and the slats are fully closed, this slat position is described as both "vertical" and "100%". Normally, however, fully closed slats do not have an exactly vertical position ($\alpha = 0^\circ$) but rather form a slight angle with the vertical.

This angle must be determined during slat tracking and entered via the parameter "Slat angle in ° after position command 100%".

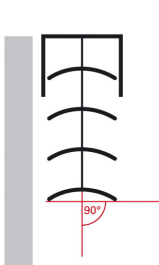


Sunshade and slats closed
/ lower stop position / 100%

Slat position 100%

From its "vertical" position (completely closed, 100%) the slats can be adjusted to their horizontal position (fully opened, $\alpha = 90^\circ$). For this, the drive used for the blinds defines whether this adjustment can take place almost continuously 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).

With standard blinds, there are usually two possible angles that can be entered in the parameter "Slat angle in ° after position command 0%". With both settings, it is important that the associated actuator that controls the blinds is also set accordingly! The first option is to enter this angle $\alpha = 90^\circ$. This setting is adequate for the glare protector.



Slat position horizontal / fully opened

$\alpha = 90^\circ$

With standard blinds, the slats can be adjusted further via their horizontal position past the point where the slat adjustment ends and the blinds begin to move upwards. The slats then form an angle between 90° and 180° with the vertical. This maximum angle can be entered as a second option in the parameter "Slat angle in ° after position com-

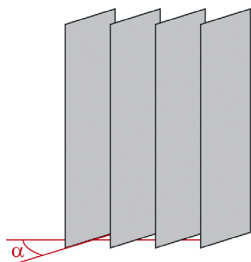
mand 0%". With this setting, all angles from approx. 0° to approx. 180° can be approached.



Slat position at the beginning of movement UP

5.13.7.Slat position for vertical slats

For an internal blind or privacy screen with vertical slats, the position in which the slats are completely closed is controlled or signalled as slat position 100%. This is the position in which the glare protection is moved from its lateral end position in front of the window. For this, the angle formed by the slats with the direction of movement is $>0^\circ$.

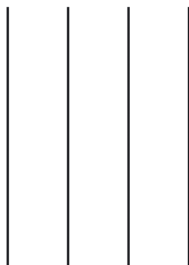


View from the outside

Fully opened vertical slats /
Slat position 100%

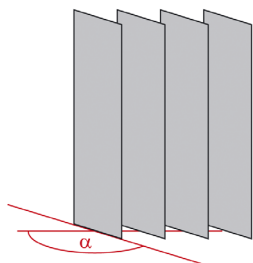
If the slats are fully open, the slats form an angle of 90° with the direction of travel from "Glare protector fully open" to "Glare protector fully closed".

Depending on the blinds used, there are usually two possible angles that can be entered in the parameter "Slat angle in ° after position command 0%". With both settings, it is important that the associated actuator that controls the blinds is also set accordingly! The first option is to enter this angle $\alpha = 90^\circ$. This setting is adequate for the glare protector.



Fully opened vertical slats /
Slat position 0%

If the glare protector is later retracted (i.e. opened), in the process the vertical slats are turned into a position that is somewhat less than 180°. This maximum angle can be entered as a second option in the parameter "Slat angle in ° after position command 0%". With this setting, all angles from approx. 0° to approx. 180° can be approached.



View from the outside

Vertical slats at the beginning of movement UP

5.14. Façade actions (Windancer KNX-GPS)

If the brightness condition is fulfilled for the specified duration and the sun position condition is fulfilled, the actions described below are executed. For conditions see chapter "Façade settings (Windancer KNX-GPS)" on page 54.

With the delay time, higher illuminance levels, for example due to a break in the clouds, can be "faded out" for a short time.

If it is bright enough (brightness condition fulfilled)	
for more than	0 s ... 2 h; <u>2 min</u>
AND	
The sun shines on the façade (sun position condition fulfilled)	

Actions:

- Façade status object is set to the value = 1.
- If shadow edge tracking is activated, the calculated position is approached. Otherwise, the movement position set here is approached.
- If slat tracking is activated, the calculated position is approached. Otherwise, the slat angle set here is approached.

Then:	
→ Object "façade 1 status" = 1	
→ Movement position in %	0 ... 100 (or follow shadow edge tracking)
→ Slat position in %	0 ... 100 (or follows slat tracking)

If the brightness condition is no longer fulfilled for the duration specified here, the actions of the "first retraction level" described below are carried out.

With the delay time, lower illuminance levels, for example due to passing clouds, can be “faded out” for a short time.

If it is not bright enough	
for more than	0 s ... 2 h; <u>10 min</u>

This is the first retraction level that can be used to not yet fully retract the shade. Such an intermediate step is particularly pleasant with large windows, as a little more light is let in, but the sunshade position is also quickly reached again when it gets lighter again shortly afterwards.

Here it is recommended not to change the movement position and to set the slat position to maximum light transmission.

Actions:

- Movement position can be changed.
- Slat position can be changed.

If no change is selected, then this “first retraction level” is skipped.

Then:	
→ Change movement position	Yes • <u>No</u>
Movement position in % <i>(only if movement position should be changed)</i>	0 ... <u>100</u>
→ Change slat position	<u>Yes</u> • No
Slat position in % <i>(only if slat position should be changed)</i>	<u>0</u> ... 100

If the brightness condition is no longer fulfilled for the duration specified here, the actions described below are carried out. The same applies if the sun position condition is not longer fulfilled.

If afterwards it is still not bright enough	0 s ... 2 h; <u>30 min</u>
OR	
The sun is no longer shining on the façade	

Actions:

- Façade status object is set to the value = 0
- Movement position can be changed.
- Slat position can be changed.

If no change is selected, the shade remains in the current position. This can be used if the shade has already been completely retracted in the “first retraction level” or if the shade is not to be completely retracted for other reasons.

Then:	
→ Object “Façade 1 status” = 0	
→ Change movement position	<u>Yes</u> • No

Movement position in % (only if movement position should be changed)	<u>0</u> ... 100
→ Change slat position	<u>Yes</u> • No
Slat position in % (only if slat position should be changed)	<u>0</u> ... 100

Transmission behaviour of the objects:

.....

The change of a movement or slat position is immediately sent to the bus.

Movement position and slat position	<ul style="list-style-type: none"> • <u>send if there is a change</u> • send on change and periodically
-------------------------------------	---

For additional periodic sending, both objects "Façade X: Movement position" and "Façade X: slat position" is sent on the bus in a fixed cycle that can be set here. The two objects are only sent cyclically as long as the façade status = 1.

Send cycle (only if façade status = 1) <i>(is sent only if "periodically" is selected)</i>	5 s ... 2 h; <u>2 min</u>
--	---------------------------

When the "Façade X status" object is to be sent on the bus is set here.

Object sends "Façade X status"	<ul style="list-style-type: none"> • <u>If there is a change</u> • on change to 1 • on change to 0 • on change and periodically • on change to 1 and periodically • on change to 0 and periodically
--------------------------------	---

When sending periodically, the object "Façade X: status" is sent on the bus in a fixed cycle that can be set here.

Send cycle <i>(is sent only if "periodically" is selected)</i>	5 s ... 2 h; <u>2 min</u>
---	---------------------------

Heat protection:

.....

The heat protection function can be used to close shades in order to shield from heat. For this, the heat protection temperature must be activated in the "Shading" section. See heat protection temperature in chapter "Shade settings (Windancer KNX-GPS)" on page 53.

Use heat protection	Yes • <u>No</u>
Movement position in % <i>(only if heat protection is used)</i>	0 ... <u>100</u>

Slat position in % (only if heat protection is used)	0 ... <u>100</u>
---	------------------

Block and safety:

.....

The façade has its own block object (Façade X: Block (1 = blocked)). For example, a manual command (push-button) can lock the automatic shading system.

Behaviour after block	<ul style="list-style-type: none"> • <u>react to the last automatic command</u> • wait for the next automatic command
-----------------------	---

Before the first communication, i.e. after commissioning or bus voltage restoration, the block can be active (1) or not (0).

Blocking object value before first communication	<u>0</u> • 1
--	--------------

In addition, a safety function can be used that moves the shade into the safe position, for example.

Use safety (lower priority than block)	Yes • <u>No</u>
---	------------------------

If the safety object is 1, the shade can be retracted or retain its position, but all other automatic actions are ignored.

Action for safety = 1	<ul style="list-style-type: none"> • <u>do not send positions</u> • move to safe position (0% / 0%)
-----------------------	---

When the safety status is removed, i.e. when a 0 is received via the safety object, the last stored automatic command can be executed or the next one can be waited for.

Action for safety = 0	<ul style="list-style-type: none"> • <u>react to the last automatic command</u> • wait for the next automatic command
-----------------------	---

5.15. Calendar timer (Windancer KNX-GPS)

The calendar timer defines switching sequences for specific periods during the year. For example, a garden pond pump can only be operated during the summer months.

Use period 1 / 2 / 3	Yes • <u>No</u>
----------------------	------------------------

5.15.1. Calendar clock period 1 / 2 / 3

The start date and end date are defined.

from:	
Month	<u>January</u> ... December
Day	<u>1</u> ... 29 / 1 ... 30 / 1 ... 31 (according to month)
Up to and including:	

Month	<u>January</u> ... December
Day	<u>1</u> ... 29 / 1 ... 30 / 1 ... 31 (according to month)

5.15.2. Calendar clock period 1 / 2 / 3, Sequence 1 / 2

A sequence sets the switch-on and switch-off time for each day of the set period.

Use sequence 1 / 2	Yes • No
Switch-on time hours	<u>0</u> ... 23
Switch-on time minutes	<u>0</u> ... 59
Switch-off time hours	<u>0</u> ... 23
Switch-off time minutes	<u>0</u> ... 59

If the switching output of the calendar clock is only used for internal logic, then it does not have to be sent to the bus.

Switching output sends	<ul style="list-style-type: none"> • <u>not</u> send • 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
------------------------	--

When sending periodically, the object "Calendar timer time X, Seq. X: switching output" is sent on the bus in a fixed cycle that can be set here.

Send cycle <i>(is sent only if "periodically" is selected)</i>	5 s ... 2 h; <u>1 min</u>
---	---------------------------

5.16. Weekly timer (Windancer KNX-GPS)

The weekly timer offers the possibility of defining different switching times on each day of the week. For example, on weekdays the shutters can be opened every morning and closed again in the evening. 4 sequences per day are available.

Monday ... Sunday	<u>not active</u> • active
-------------------	----------------------------

5.16.1. Weekly clock Mo, Tu, We, Th, Fr, Sa, Su 1 ... 4

A sequence sets the switch-on and switch-off time for the day of the week.

If, for example, 8:35 is set as the switch-on time, the output switches off on the change from 8:34 to 8:35.

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.

Switch-on time hours	<u>0</u> ... 23
Switch-on time minutes	<u>0</u> ... 59
Switch-off time hours	<u>0</u> ... 23
Switch-off time minutes	<u>0</u> ... 59

A time switching sequence can be assigned to an OR connection. This allows another condition to be added directly in the OR connection in addition to the time. For example, a roller shutter can be opened every morning at 7:00 OR when it is brighter than 10 lux. More in chapter "Use of the weekly clock" on page 69.

The sequence 1 / 2 / 3 / 4 should be allocated to OR 1 / 2 / 3 / 4	Yes • <u>No</u>
--	-----------------

If the switching output of the weekly timer is only used for internal logic, then it does not have to be sent to the bus.

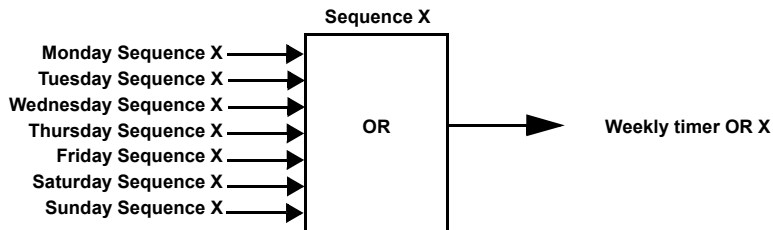
Switching output sends	<ul style="list-style-type: none"> • <u>not</u> send • on change • on change to 1 • on change to 0 • on change and periodically • on change to 1 and periodically • on change to 0 and periodically
------------------------	--

When sending periodically, the object "Weekly timer [week day] X: switching output" is sent on the bus in a fixed cycle that can be set here.

Send cycle (is sent only if "periodically" is selected)	5 s ... 2 h; <u>1 min</u>
--	---------------------------

5.16.2. Use of the weekly clock

If the sequence X of a weekday is assigned to the OR connection X, all these assignments are OR-linked with each other. The logical result of this connection can be used as input for an OR logic gate.



5.17. Logic

The device has 16 logic inputs, six AND and six 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.

Use logic inputs	<u>No</u> • Yes
Object value prior to 1st Communication for:	
Logic input 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 / 16	<u>0</u> • 1

Which logic gate should be used is selected here.

AND logic

.....

AND Logic 1 / 2 / 3 / 4 / 5 / 6	<u>not active</u> • active
---------------------------------	----------------------------

OR logic

.....

OR Logic 1 / 2 / 3 / 4 / 5 / 6	<u>not active</u> • active
--------------------------------	----------------------------

5.17.1.AND Logic 1 / 2 / 3 / 4 / 5 / 6

Four inputs can be defined for each logic gate.

1. / 2. / 3. / 4. Input	<ul style="list-style-type: none"> • <u>Do not use</u> • all switching events that the device provides (see "AND logic connection inputs")
-------------------------	--

Each logic output can transmit one 1-bit or two 8-bit objects.

Logic output sends	<ul style="list-style-type: none"> • <u>a 1-bit-object</u> • sends two 8-bit objects
--------------------	--

If the **output type is a 1-bit-object**, both object values are set.

if logic = 1 → object value	<u>1</u> • 0
if logic = 0 → Object value	1 • <u>0</u>

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

Send behaviour	<ul style="list-style-type: none"> • <u>on change of logic</u> • on change of logic to 1 • on change of logic to 0 • on change of logic and periodically • on change of logic to 1 and periodically • on change of logic to 0 and periodically
----------------	--

When sending periodically, the AND logic object is sent on the bus in a fixed cycle that can be set here.

Send cycle (is sent only if "periodically" is selected)	<u>5 s</u> ... 2 h
--	--------------------

If the **output type is two 8-bit-objects**, the object type and object values are set.

Type of objects	<ul style="list-style-type: none"> • Value [0...255] • Percent [0...100%] • Angle [0...360°] • Scene call-up [0...63]
If logic = 1 → Object A value	<u>0</u> ... 255
If logic = 0 → Object A value	<u>0</u> ... 255
If logic = 1 → Object B value	<u>0</u> ... 255
If logic = 0 → Object B value	<u>0</u> ... 255

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

Send behaviour	<ul style="list-style-type: none"> • <u>on change of logic</u> • on change of logic to 1 • on change of logic to 0 • on change of logic and periodically • on change of logic to 1 and periodically • on change of logic to 0 and periodically
----------------	--

When sending periodically, the AND logic object is sent on the bus in a fixed cycle that can be set here.

Send cycle (is sent only if "periodically" is selected)	<u>5 s</u> ... 2 h
--	--------------------

For example, frost protection can be realised as follows:

AND X input 1 = rain (with 2h switch-off delay)

AND X input 2 = temperature GW1 (= 1 on falling below +1.0°C for example)

AND X output A = 0%

AND X output B = 0%

AND X outputs send on change to 1

Block:

.....

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.

Assessment of the block object	<ul style="list-style-type: none"> • <u>At value 1: block At value 0: release</u> • <u>At value 0: block At value 1: release</u>
--------------------------------	--

Before the first communication, i.e. after commissioning or bus voltage restoration, the block can be active (1) or not (0).

Blocking object value before first communication	<u>0</u> • 1
--	--------------

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

Switching output behaviour	
On blocking	<ul style="list-style-type: none"> • <u>Do not send message</u> • send 0 • send 1
On release (with 2 second release delay)	[Dependent on the "Switching output sends" setting]

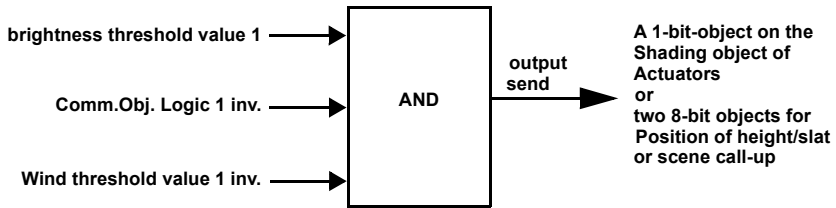
The behaviour of the output on release is dependent on the value of the parameter "send pattern".

Switching output sends on change	do not send message • Status object/s send/s
Switching output sends on change to 1	do not send message • if switching output = 1 → send 1
Switching output sends on change to 0	do not send message • if switching output = 0 → send 0
Switching output sends on change and periodically	Send switching output status
Switching output sends on change to 1 and periodically	if switching output = 1 → send 1
Switching output sends on change to 0 and periodically	if switching output = 0 → send 0

5.17.2. Use of the AND logic

Sun automation example

The AND logic can be used, for example, to define the conditions for shading, such as a brightness threshold value, and also the reactivation of shading after a wind alarm and blocking by manual operation were included in this example.



- Brightness threshold value 1: Defines the brightness from which shading will occur.
- Communications object Logic 1 inverted: Blocking function for the sun automation, e.g. via a button (blocking following manual operation). Logic = 0 → released, logic = 1 → blocked. The "Communication objects logic inputs" must be enabled for this under "Logic" on page 70 and the "Communication object logic 1" must be linked to the push-button via group addresses.
- Wind threshold value 1 inverted: The automation activates again once a wind alarm is over (i.e. if the other conditions are fulfilled, shading will occur again).

5.17.3.AND logic connection inputs

do not use (AND)

do not use (OR)

Logic input 1

Logic input 1 inverted

Logic input 2

Logic input 2 inverted

Logic input 3

Logic input 3 inverted

Logic input 4

Logic input 4 inverted

Logic input 5

Logic input 5 inverted

Logic input 6

Logic input 6 inverted

Logic input 7

Logic input 7 inverted

Logic input 8

Logic input 8 inverted

Logic input 9

Logic input 9 inverted

Logic input 10

Logic input 10 inverted

Logic input 11

Logic input 11 inverted

Logic input 12

Logic input 12 inverted

Logic input 13
Logic input 13 inverted
Logic input 14
Logic input 14 inverted
Logic input 15
Logic input 15 inverted
Logic input 16
Logic input 16 inverted
Temperature Sensor Malfunction = ON
Temperature Sensor Malfunction = OFF
Switching output rain 1
Switching output rain 1 inverted
Switching output rain 2
Switching output rain 2 inverted
Switching output night
Switching output inverted
Switching output temp 1
Switching output temp 1 inverted
Switching output temp 2
Switching output temp 2 inverted
Switching output temp 3
Switching output Temp 3 inverted
Switching output temp 4
Switching output temp 4 inverted
Switching output wind 1
Switching output wind 1 inverted
Switching output wind 2
Switching output wind 2 inverted
Switching output wind 3
Switching output wind 3 inverted
Switching output bright (East / South / West) 1 (Windancer KNX)
Switching output bright (East / South / West) 1 inverted (Windancer KNX)
Switching output bright (East / South / West) 2 (Windancer KNX)
Switching output bright (East / South / West) 2 inverted (Windancer KNX)
Switching output bright (East / South / West) 3 (Windancer KNX)
Switching output bright (East / South / West) 3 inverted (Windancer KNX)
Switching output bright 4
Switching output bright 4 inverted
Switching output Twil 1
Switching output Twil 1 inverted
Switching output Twil 2
Switching output Twil 2 inverted
Switching output Twil 3
Switching output Twil 3 inverted

Windancer KNX-GPS:

GPS Malfunction = ON
GPS Malfunction = OFF

Façade 1 Status
Façade 1 Status inverted
Façade 2 Status
Façade 2 Status inverted
Façade 3 Status
Façade 3 Status inverted
Façade 4 Status
Façade 4 Status inverted
Façade 5 Status
Façade 5 Status inverted
Façade 6 Status
Façade 6 Status inverted
Façade 7 Status
Façade 7 Status inverted
Façade 8 Status
Façade 8 Status inverted
Switching output Cal. clock Per. 1 Seq. 1
Switching output Cal. clock Per. 1 Seq. 1 inverted
Switching output Cal. clock Per. 1 Seq. 2
Switching output Cal. clock Per. 1 Seq. 2 inverted
Switching output Cal. clock Per. 2 Seq. 1
Switching output Cal. clock Per. 2 Seq. 1 inverted
Switching output Cal. clock Per. 2 Seq. 2
Switching output Cal. clock Per. 2 Seq. 2 inverted
Switching output Cal. clock Per. 3 Seq. 1
Switching output Cal. clock Per. 3 Seq. 1 inverted
Switching output Cal. clock Per. 3 Seq. 2
Switching output Cal. clock Per. 3 Seq. 2 inverted
Switching output weekly clock Monday 1
Switching output weekly clock Monday 1 inverted
Switching output weekly clock Monday 2
Switching output weekly clock Monday 2 inverted
Switching output weekly clock Monday 3
Switching output weekly clock Monday 3 inverted
Switching output weekly clock Monday 4
Switching output weekly clock Monday 4 inverted
Switching output weekly clock Tuesday 1
Switching output weekly clock Tuesday 1 inverted
Switching output weekly clock Tuesday 2
Switching output weekly clock Tuesday 2 inverted
Switching output weekly clock Tuesday 3
Switching output weekly clock Tuesday 3 inverted
Switching output weekly clock Tuesday 4
Switching output weekly clock Tuesday 4 inverted
Switching output weekly clock Wednesday 1
Switching output weekly clock Wednesday 1 inverted
Switching output weekly clock Wednesday 2
Switching output weekly clock Wednesday 2 inverted

Switching output weekly clock Wednesday 3
Switching output weekly clock Wednesday 3 inverted
Switching output weekly clock Wednesday 4
Switching output weekly clock Wednesday 4 inverted
Switching output weekly clock Thursday 1
Switching output weekly clock Thursday 1 inverted
Switching output weekly clock Thursday 2
Switching output weekly clock Thursday 2 inverted
Switching output weekly clock Thursday 3
Switching output weekly clock Thursday 3 inverted
Switching output weekly clock Thursday 4
Switching output weekly clock Thursday 4 inverted
Switching output weekly clock Friday 1
Switching output weekly clock Friday 1 inverted
Switching output weekly clock Friday 2
Switching output weekly clock Friday 2 inverted
Switching output weekly clock Friday 3
Switching output weekly clock Friday 3 inverted
Switching output weekly clock Friday 4
Switching output weekly clock Friday 4 inverted
Switching output weekly clock Saturday 1
Switching output weekly clock Saturday 1 inverted
Switching output weekly clock Saturday 2
Switching output weekly clock Saturday 2 inverted
Switching output weekly clock Saturday 3
Switching output weekly clock Saturday 3 inverted
Switching output weekly clock Saturday 4
Switching output weekly clock Saturday 4 inverted
Switching output weekly clock Sunday 1
Switching output weekly clock Sunday 1 inverted
Switching output weekly clock Sunday 2
Switching output weekly clock Sunday 2 inverted
Switching output weekly clock Sunday 3
Switching output weekly clock Sunday 3 inverted
Switching output weekly clock Sunday 4
Switching output weekly clock Sunday 4 inverted
Weekly clock OR 1
Weekly clock OR 1 inverted
Weekly clock OR 2
Weekly clock OR 2 inverted
Weekly clock OR 3
Weekly clock OR 3 inverted
Weekly clock OR 4
Weekly clock OR 4 inverted

5.17.4. OR Logic 1 / 2 / 3 / 4 / 5 / 6

Four inputs can be defined for each logic gate.

1. / 2. / 3. / 4. Input	<ul style="list-style-type: none"> • <u>Do not use</u> • all switching events that the sensor provides (see "Connection inputs of OR logic")
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All settings of the OR logic correspond to those of the AND logic.

5.17.5. OR LOGIC connection inputs

The OR logic connection inputs are the same as those for the AND logic. *Additionally*, the following inputs are available for the OR logic:

Switching output AND logic 1
 Switching output AND logic 1 inverted
 Switching output AND logic 2
 Switching output AND logic 2 inverted
 Switching output AND logic 3
 Switching output AND logic 3 inverted
 Switching output AND logic 4
 Switching output AND logic 4 inverted
 Switching output AND logic 5
 Switching output AND logic 5 inverted
 Switching output AND logic 6
 Switching output AND logic 6 inverted

Questions about the product?

You can reach the technical service of Elsner Elektronik under
Tel. +49 (0) 70 33 / 30 945-250 or
service@elsner-elektronik.de

We need the following information to process your service request:

- Type of appliance (model name or item number)
- Description of the problem
- Serial number or software version
- Source of supply (dealer/installer who bought the device from Elsner Elektronik)

For questions about KNX functions:

- Version of the device application
- ETS version used for the project

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