

KNX converter WMS

Software manual



General notes

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1 Overview



This manual describes the functions of the KNX converter WMS. The KNX converter WMS allows for the integration of WMS receivers into an existing KNX building automation.

The designations and the number of objects, as shown in the illustrations, may vary depending on the device and software version.

1.1 General notes on the KNX converter WMS

The KNX converter WMS enables the control of up to 25 WMS receivers. Product parameters, scenarios and safety objects can be configured in the ETS.

Commissioning is carried out via the WMS studio pro PC software and the ETS.

Start with the WMS commissioning, as the WMS parameters (e.g. min./max. slat angle of the sun shading products) are required for KNX parameterisation. Then put the KNX side into operation using the ETS.

Several KNX converter WMS can be used in one project.

The device is KNX secure compatible. A device certificate (preset key at the factory) is required for this. This is located on the device as a label and is also included as a device card.

Store the device card separately and also remove the sticker from the device to ensure maximum security.

The device certificate is unique to each device and cannot be changed or deleted.

The device has the following features:

- ▶ Supports KNX secure
- ▶ Can be updated via the KNX bus with the WAREMA KNX Service app (available in the KNX online shop)
- ▶ Retrofitting with little installation work thanks to flush-mounted housing
- ▶ Control via 8 definable scenarios per output
- ▶ Status objects
- ▶ Control via bit and byte objects
- ▶ Safety objects trigger WMS central commands

1.2 Additional documentation

Further information on the installation and commissioning of the KNX converter WMS can be found in the relevant installation instructions (art no.: 2074287).



In this document, group objects will be abbreviated to **GO**.

2 Safety instructions

We have developed and tested the KNX converter WMS in compliance with the basic safety requirements.

Residual risks nevertheless remain.

- For this reason, please read this manual before commissioning and operating the control.
- **It is very important that you adhere to the safety instructions listed in this section and the warnings contained in this manual. Failure to do so will void any warranty claims against the manufacturer.**
- Keep this manual for future use.

2.1 Meanings of symbols and pictograms

The safety instructions contained in these instructions are marked with warning symbols. Depending on the respective danger potential, they have the following hierarchic structure:



DANGER

Warns of an **imminently dangerous situation**.

Possible consequences **may include serious injuries and even death (personal injury), property damage or environmental damage.**



WARNING

Warns of a **potentially dangerous situation**.

Possible consequences **may include mild or serious injuries and even death (personal injury), property damage or environmental damage.**



CAUTION

Reminder to **exercise caution**.

Failure to comply may result in **property damage**.

The following pictograms or symbols may have been affixed to the control itself or to the connected devices alerting you to specific potential dangers:



WARNING

Warns of **dangerous electrical voltage**.



The **i** symbol designates important **information** and helpful **tips**.

Example The term **Example** denotes an **example**.

- The **square** denotes an **instruction** or a **prompt for action**. Perform this action.
- ▶ The **triangle** denotes an **event** or the **result** of a previous action.
- ▶ The **black triangle** is a **bullet point** for lists or selections.

2.2 Intended use

The KNX converter WMS is an electronic device for forwarding control commands and therefore controlling WMS receivers on a KNX network.



WARNING

Please obtain the approval of the manufacturer if you have questions regarding the connection of devices not listed in these instructions!

All control devices are intended to be installed **indoors** unless specified otherwise.



WARNING

The approval of the manufacturer must be obtained for uses outside of those listed here! The consequences of unintended use may include personal injury to the operator or third parties as well as property damage to the control itself, to connected devices or to moveable mechanical parts of the entire unit.

- Therefore, use our product only as intended!

2.3 Target group

These instructions are intended for persons who are commissioning a sun shading system with a WMS radio system and KNX technology as well as for qualified technicians. Knowledge of the WMS system and KNX technology is essential.



WARNING

Commissioning and operation by persons who are not sufficiently qualified and informed can cause severe damage to the unit or may even cause personal injury.

- Commissioning may therefore only be performed by properly trained and qualified technicians. These technicians must be able to recognise sources of danger that may be caused by the mechanical, electrical or electronic equipment.
- Persons commissioning the unit must know and understand the content of these instructions.

2.4 General safety instructions

The control system controls your sun shading system automatically. You must therefore observe the following safety instructions:



WARNING

An automatically controlled mechanism may begin to move unexpectedly.

- Therefore, never place any objects in the area of an automatically controlled mechanism. Make sure that no persons are located in the movement range of automatically controlled sun shading products during commissioning.
- If measuring or test work needs to be carried out on the active unit, make sure that applicable accident prevention regulations are observed under all circumstances.



CAUTION

The entire unit becomes non-functional in the event of a power failure. Therefore, move your sun shading system to a safe position ahead of time if a storm is imminent. Changing individual parameters may impair the safety of the unit or reduce its effectiveness. It is better to consult a qualified specialist if you are not sure about the effects of a change.

3 General information

3.1 Technical data

Technical data, wiring diagrams and specifications for electrical lines and connectable devices can be found in the installation instructions for the KNX converter WMS (art. no.: 2074287).

3.2 Master reset

The master reset returns the KNX converter WMS to its delivery condition. All group addresses in the device are deleted, all parameters are set to the default values and the physical address is set to 15.15.255.

The key to access the device is reset to the factory default setup key (FDSK).

The loaded WMS project is also deleted and needs to be reloaded onto the KNX converter WMS with WMS studio pro!

A master reset is performed as follows:

1. Switch off the operating voltage
2. Press and hold the programming button
3. Switch on the operating voltage
4. Wait for the programming LED to start flashing and release the button after approx. 10 seconds
5. Wait for the programming LED to go out
6. The master reset is finished

After a master reset, the device must be recommissioned.

4 Commissioning

Start with the WMS commissioning, as the WMS parameters (e.g. min./max. slat angle of the sun shading products) are required for KNX parameterisation. Then put the KNX side into operation using the ETS.

Step 1: WMS
Step 2: KNX

The KNX converter WMS is commissioned using the following software tools:

Software	at least	recommended
WMS studio pro	Version 4.33	latest version
Engineering Tool Software (ETS)	ETS 5	latest version

Before initial operation of the KNX converter WMS, move all connected sun shading products to a safe position, e.g. move external venetian blinds to their upper limit position.

4.1 Electrical connections

Technical data, wiring diagrams and specifications for electrical lines and connectable devices can be found in the installation instructions for the KNX converter WMS.



A special KNX commissioning power supply unit with a connecting line (art. no. 2084956) can be used to commission the WMS page of the KNX converter WMS (before the device is connected to a KNX bus).

Connecting the KNX converter WMS to a normal DC power supply unit can destroy the device!



CAUTION

Only connect sun shading products with correctly adjusted limit switches to prevent damage when commissioning.

4.2 WMS studio pro

The basic procedure for commissioning is described below. Configuration details are not described here. For this, see the WMS documentation.

The first step is to create a WMS project. WMS studio pro is required (version 4.33 or newer).



Give all devices memorable alias names in the WMS project so that it is easier to assign them to the WMS receiver later when commissioning the KNX (also important if several KNX converter WMS are used in one project).

- ▶ Set up a WMS receiver (selection → receiver)
- ▶ Configure the WMS receiver (settings)



Activation of the safety controls is recommended to protect the connected sun shading systems in WMS. For instance, this would ensure any failure of the weather station is detected.

- ▶ Set up the KNX converter (selection → multi-channel transmitter)
- ▶ Assign the desired KNX converter WMS channel to the WMS receiver (settings). Each channel can be assigned to one WMS receiver.
- ▶ After configuration, load the devices via WMS connection (transfer, WMS Stick required). The KNX converter WMS must be supplied with voltage via the KNX bus or a commissioning power supply unit.
- ▶ Export the WMS setting protocol. The information for the following parameterisation is included in the ETS (project → export parameter → PDF).

WMS Einstellungsprotokoll

Empfänger

Nr	Aliasname	Produkttyp	Seriennummer	Winkel		Komfort- und Sicherheitsfunktionen						
				Min	Max	Sonne	Temperatur	Zeitschaltuhr	Dämmerung	Wind	Niederschlag	Eis
1	N/A	Lamellendach Wendemotor	N/A	-45°	90°	-	-	-	-	-	-	-
2	Lamaxa	Lamellendach fahren	N/A	-45°	90°	-	-	-	-	-	-	-
3	Load dimmable	Last dimmbar	N/A	N/A	N/A	-	-	-	-	-	-	-
4	LED dimmable	LEDs dimmbar	N/A	N/A	N/A	-	-	-	-	-	-	-
5	Switch socket	Steckdose schalten	N/A	N/A	N/A	-	-	-	-	-	-	-

Sender

KNX converter - WMS KNX Converter (N/A)						
Kanal	Produkttyp des Kanals		Kanalname	Zugeordnete Empfänger		
				Seriennummer	Aliasname	Min Winkel
1	Lamellendach fahren		Lamaxa	N/A	Lamaxa	-45° 90°
2	Last dimmbar		Load dimmable	N/A	Load dimmable	N/A N/A
3	LEDs dimmbar		LED dimmable	N/A	LED dimmable	N/A N/A
4	Steckdose schalten		Switch socket	N/A	Switch socket	N/A N/A

Abb. 1 WMS setting protocol

4.3 ETS

In the next step, set up the KNX converter WMS in the KNX project and parameterise. ETS is required (from version 5).



Have the WMS setting protocol to hand. The information for parameterisation is included in the ETS (channel number, channel name, receiver assigned, slat angle,...).

- ▶ Open the KNX project.
- ▶ Load the product database for the KNX converter WMS and add it. The product database required for this (.knxprod) can be found in the online catalogue of the ETS or on the internet at <http://www.warema.de/knx>.

Parameterise the KNX converter WMS:

- ▶ Determine the number of WMS receivers to be controlled (device parameters → outputs)
 - ▶ Parameterise the individual outputs (WMS on: output). Enter the information from the WMS setting protocol here. The required KNX product type can be found in the table in *chapter 5 on page 15*.
 - ▶ The relevant group objects are displayed/hidden depending on the configuration.
 - ▶ Link the group objects with the KNX group addresses of the desired control panels.
-
- ▶ Load the physical address and the application in the KNX converter WMS (and other devices if needed):

4.3.1 Commissioning (using ETS in standard mode) on page 12

or

4.3.2 Secure commissioning (using ETS in secure mode) on page 13

or

4.3.3 Programming devices using the serial number in the ETS app on page 14



The product types of the output channels are set during parameterisation. For each selected product type, only a specific set of group objects is required in the ETS. Group objects that are not required are automatically hidden by the ETS. Thus, if the product type is changed, links that already exist may be deleted from ETS project.

4.3.1 Commissioning (using ETS in standard mode)

Commissioning is performed as follows:

1. Switch on the bus voltage
2. Press the programming button on the device (programming LED lights up)



Abb. 2 Programming button (1) and display LED (2) on the front of the device

3. Load the physical address and application into the device from the ETS
4. Wait for the programming LED to go out
5. Check function of the device



Information on safe commissioning can be found in section 4.3.2 Secure commissioning (using ETS in secure mode) on page 13.



If the programming mode is to be terminated earlier, press the programming button again. The red LED goes out.



The device is delivered with the physical address 15.15.255.

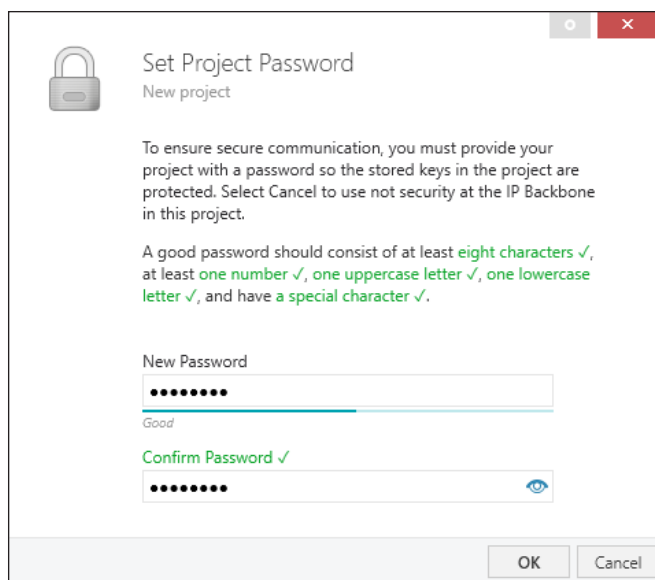


After commissioning or after voltage recovery, the position of the connected sun shading products is not recognised. For this reason, when a move command is executed for the first time, the connected sun shading products initially perform a calibration in some circumstances.

4.3.2 Secure commissioning (using ETS in secure mode)

Commissioning is performed as described in section 4.3.1. The following additional steps are required in the ETS:

1. Add KNX converter WMS
2. Set project password (This window is only displayed when the first secure device is added to the project.)



Set Project Password
New project

To ensure secure communication, you must provide your project with a password so the stored keys in the project are protected. Select Cancel to use not security at the IP Backbone in this project.

A good password should consist of at least **eight characters** ✓, at least **one number** ✓, **one uppercase letter** ✓, **one lowercase letter** ✓, and have **a special character** ✓.

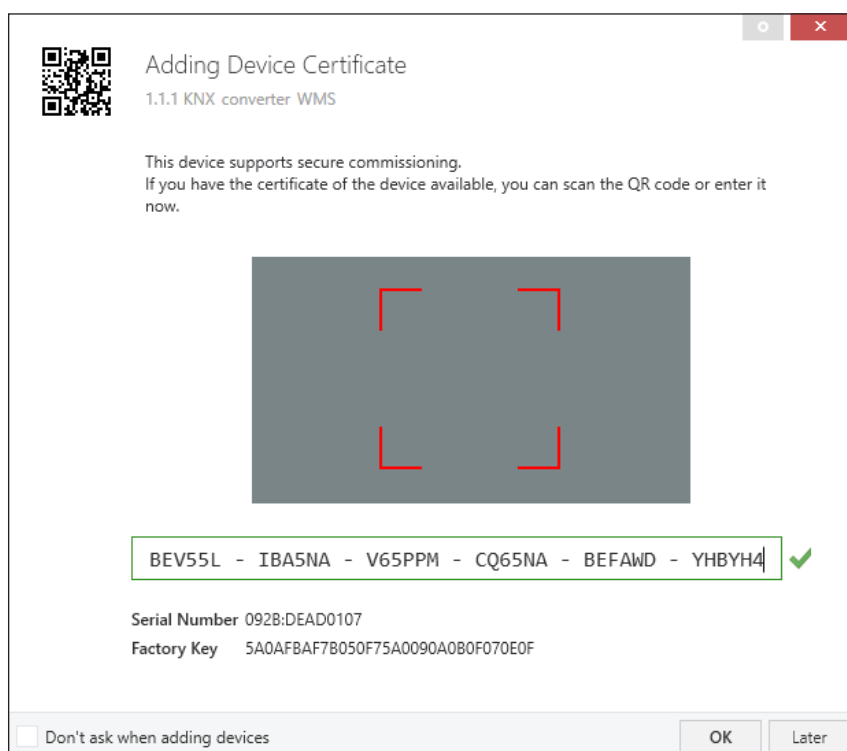
New Password

 Good

Confirm Password ✓
 

OK Cancel

3. Add device certificate (scan QR code on the KNX converter WMS or enter the code via the keyboard. If entered correctly, the serial number and FDSK of the actuator are displayed in the same window.)



Adding Device Certificate
1.1.1 KNX converter WMS

This device supports secure commissioning.
If you have the certificate of the device available, you can scan the QR code or enter it now.





BEV55L - IBA5NA - V65PPM - CQ65NA - BEFAWD - YHBYH4 ✓

Serial Number 0928:DEAD0107
Factory Key 5A0AFBAF7B050F75A0090A0B0F070E0F

☐ Don't ask when adding devices

OK Later

4.3.3 Programming devices using the serial number in the ETS app

To enable the commissioning using the device serial number in the ETS, a two-part label is attached to the bottom side of the device. The serial number of the device appears on both parts of the label as a barcode and plain text. One part of the label can be removed by the installer and applied to the floor plan of the building or the installation instructions.

Thanks to the free ETS app **SIEMENS Address by ID** provided by Siemens it is then possible to commission the devices without having to press the programming button.

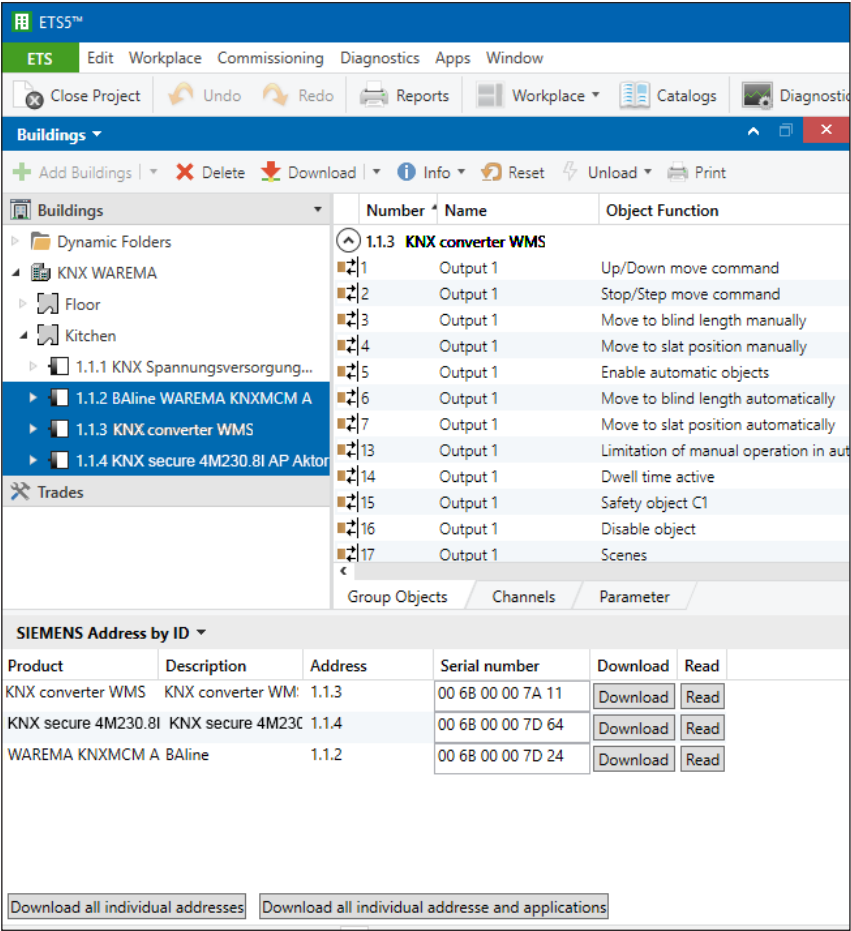


Abb. 3 SIEMENS ETS app for commissioning using the device serial number



The function "Addressing via serial number" is possible from ETS version 6.1.1, without an additional app.

5 Product types

A product type suitable for the WMS receiver in the assigned WMS channel must be selected for each output of the KNX converter WMS.



CAUTION

Incorrect parameterisation of a product can cause defective movement behaviour. This may result in material damage and personal injury.

Each WMS receiver for the relevant KNX product type is assigned in the following table. In the comments columns there are additional required parameterisation or other notes.

WMS product	WMS receiver	KNX product type	Note
	External venetian blind	Venetian blind / external venetian blind	The suitable product type must be set in the <i>product parameter</i> menu. The tilt angle (min/max) must match with the WMS slat angle.
	Roller shutter	Roller shutter / textile sun shading systems	-
	Awning	Awning	In the <i>product parameter</i> menu, the parameter <i>A controllable valance roller blind is present</i> must be deactivated .
	Conservatory awning	Awning	-
	Pergola awning	Awning	-
	Awning +WMS Wind sensor	Awning	In the <i>product parameter</i> menu, the parameter <i>A controllable valance roller blind is present</i> must be deactivated .
	Awning + valance roller blind	Awning	In the <i>product parameter</i> menu, the parameter <i>A controllable valance roller blind is present</i> must be activated .
	Awning + valance roller blind + WMS Wind sensor	Awning	In the <i>product parameter</i> menu, the parameter <i>A controllable valance roller blind is present</i> must be activated .
	Awning + 2xvalance roller blind	Awning	In the <i>product parameter</i> menu, the parameter <i>A controllable valance roller blind is present</i> must be activated .
	Awning + 2xvalance roller blind + WMS Wind sensor	Awning	In the <i>product parameter</i> menu, the parameter <i>A controllable valance roller blind is present</i> must be activated .
	Pergola awning + wind sensor	Awning	-
	Pergola awning + valance roller blind	Awning	In the <i>product parameter</i> menu, the parameter <i>A controllable valance roller blind is present</i> must be activated .

	Pergola awning + valance roller blind + WMS Wind sensor	Awning	In the <i>product parameter</i> menu, the parameter <i>A controllable valance roller blind is present</i> must be activated .
	Conservatory awning + WMS Wind sensor	Awning	-
	Conservatory awning + valance roller blind	Awning	In the <i>product parameter</i> menu, the parameter <i>A controllable valance roller blind is present</i> must be activated .
	Conservatory awning + valance roller blind + WMS Wind sensor	Awning	In the <i>product parameter</i> menu, the parameter <i>A controllable valance roller blind is present</i> must be activated .
	Floating output	cannot be assigned	Product type is not supported by the KNX converter WMS.
	LED dimmable	Light	In the <i>product parameter</i> menu, the function type <i>Dim</i> must be activated.
	Switching the lights	Light	In the <i>product parameter</i> menu, the function type <i>Switch</i> must be activated.
	Load dimmable	Radiant heater	In the <i>product parameter</i> menu, the function type <i>Dim</i> must be activated.
	Switch load	Radiant heater	In the <i>product parameter</i> menu, the function type <i>Switch</i> must be activated.
	Switch power socket	Switching	-
	Tilt Lamaxa	Slat roof	In the <i>product parameter</i> menu, the parameter <i>Just tilt</i> must be activated.
	Lamaxa	Slat roof	In the <i>product parameter</i> menu, the parameter <i>Just tilt</i> must be deactivated .
	Sun sail	Awning	-
	Drop-arm awning	Roller shutter / textile sun shading systems	-
	Facade awning	Roller shutter / textile sun shading systems	-
	Markisolette	Roller shutter / textile sun shading systems	-
	Vertical awning	Roller shutter / textile sun shading systems	-

	Awning with easyZIP guidance	Roller shutter / textile sun shading systems	-
	Window	cannot be assigned	Product type is not supported by the KNX converter WMS.
	Internal venetian blind	Venetian blind / external venetian blind	In the <i>product parameter</i> menu, the <i>user-defined</i> product type must be set. The tilt angle (min/max) must match with the WMS slat angle.
	Pleated blind, inside	Roller shutter / textile sun shading systems	-
	Roller blind	Roller shutter / textile sun shading systems	-

6 Parameter dialogue

For the KNX converter WMS, the parameter dialogue is divided in the ETS into five groups:

Parameter group	Functions	Description
Device parameters	General device settings	Section 6.1 on page 19
Status texts	The texts that provide information about the current status in the WMS network are defined in this window.	Section 6.2 on page 20
WMS on: output product parameters, general	The parameters for the relevant output are set here. Menus on: <i>Output</i> with more sub-menus are displayed as soon as the corresponding outputs have been activated in the device parameters menu. If a name was assigned to the output, this is displayed instead of the designation "Output".	Section 6.3.1 on page 21
WMS on: output product-specific settings	Depending on the product type, other product-specific parameters are displayed and relevant group objects are provided.	Section 6.3.2 on page 22
WMS on: output scenarios	The commands that are sent are parameterised here if the KNX bus calls up a scenario.	Section 6.3.3 on page 25
WMS on: output status	Determines when and how often actual values and status information are evaluated or sent from the WMS network.	Section 6.3.4 on page 26
WMS on: output safety	The device behaviour is parameterised on the safety object here.	Section 6.3.5 on page 28



The default values are shown in **bold** in the following parameter tables.

6.1 Device parameters

These windows contain the device-specific settings.

Device parameters

Status texts

Carry out the "WMS studio pro" parameterisation first!

Outputs

Number of WMS receivers to control

0

Basic settings

Send and switch delay time

Boot time

Maximum telegram rate

Restriction off

Object "Device available"

Object "Device available" active
☒

Time for cyclic sending [hh:mm:ss]

00:05:00

hh:mm:ss

Object value

☒ 1
☐ 0

Abb. 4 Parameter dialogue: Device parameters

Parameter	Function	Values
Number of WMS receivers to control	The number of WMS receivers that should be controlled is set here. Only the parameter dialogue and the group objects for the outputs activated here are displayed.	0 : 25
Transmit and switch delay time	The delay, if any, with which the device starts up after being switched on can be specified here	Boot time Boot time + 1 second Boot time + 3 seconds Boot time + 10 seconds
Maximum telegram rate	Restriction of the maximum number of telegrams that the device sends per second. The load of the KNX bus from the device can thus be reduced if necessary.	Restriction off 20 telegrams per second 10 telegrams per second 3 telegrams per second 1 telegram per second
Object "Device available" active	The object "Device available" signals whether the KNX converter WMS is ready for operation. Here you can set whether the object should be used.	OFF ON
Time for cyclical transmission [hh:mm:ss]	The object "Device available" can be sent again. The interval between two consecutive repeats can be parameterised here. Setting the value to 0 causes the object to just be sent once.	00:00:00 : 00:05:00 : 23:59:59
Object value	Specifies whether the object "Device available" transmits a 0 or a 1 for an actuator that is ready for operation.	0 1

6.2 Status texts

The texts that provide information about the current status in the WMS network are defined in this window.

The group object **WMS status text** is available for each output. The text defined here is output via this GO when the status appears. The text may have a maximum of 14 characters.



The group objects **WMS status bit** and **WMS status text** can be activated for each output separately in the *status* menu.

Device parameters	WMS status texts	
Status texts	No blocking	
	No weather data received	No sensor Data
	Wind monitoring triggered	Wind alarm
	Ice monitoring triggered	Ice alarm
	Precipitation monitoring triggered	Rain alarm
	Locking triggered externally	Ext. locking
	Thermal protection triggered in motor	Thermal prot.

Abb. 5 Parameter dialogue: status texts

6.3 Outputs

- ▶ Menus **WMS on: Output** with more sub-menus are displayed as soon as the corresponding outputs have been activated in the device parameters menu. If a name was assigned to the output, this is displayed instead of the designation "Output".
- ▶ Product parameters, scenarios and safety settings can be parameterised for each output. Number and type of product parameters depends on the selected product type and is displayed or hidden in the menu accordingly.

6.3.1 Product parameters, general

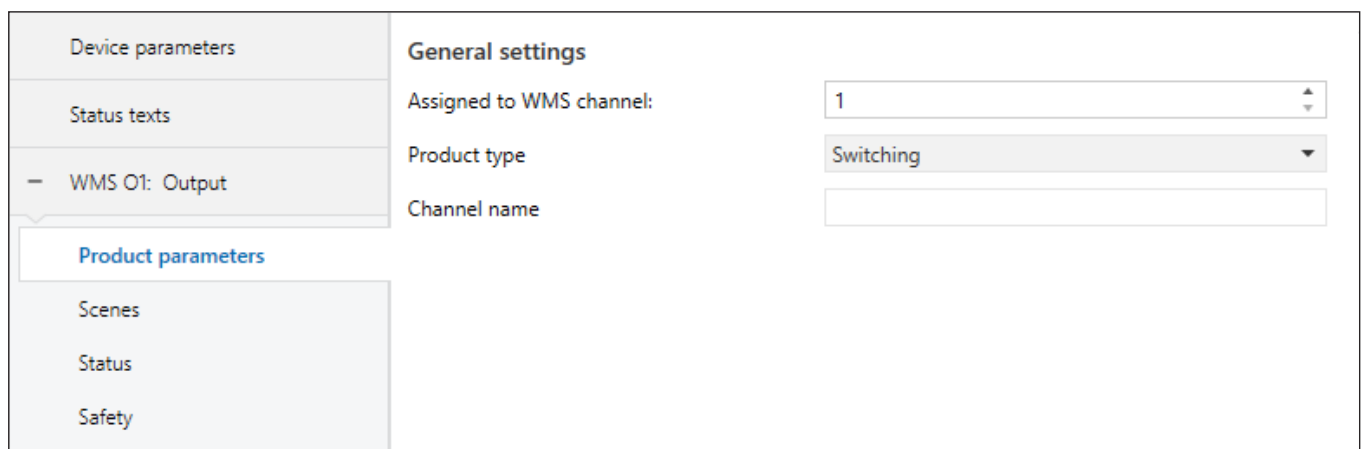


Abb. 6 Parameter dialogue: WMS on: output → product parameter

Parameter	Function	Values
Assigned WMS channel	The channel of the WMS receiver that should be controlled is set here. As a default value, the channel number entered here is the same as the output number. For a better overview, and to avoid using several WMS channel numbers, this allocation should remain the same.	1 : 25
Product type	Product type selection The product type determines the operating behaviour for the output. Depending on the product type, other product-specific parameters are displayed and relevant group objects are provided.	Venetian blind / external venetian blind Awning Roller shutter / textile sun shading systems Slat roof Light Radiant heater Switching
Channel name	A name for the output can be specified here so that it is easier to assign.	Text (max. 80 characters)
Product-specific settings	Product-specific settings are displayed accordingly for the selected product type.	see <i>Section 6.3.2 on page 22</i>



For changes to the product type, the assigned group addresses are separated again for the relevant output.

6.3.2 Product-specific settings

Depending on the product type, other product-specific parameters are displayed and relevant group objects are provided.

Device parameters

Status texts

WMS O1: Output

Product parameters

Scenes

Status

Safety

General settings

Assigned to WMS channel:1

Product typeVenetian blind / external venetian blind

Channel name

Product type specific settings

To ensure that the device converts correctly between the KNX slat position and the WMS slat angle, both the minimum and maximum tilt angle must be specified

Product typeCustom

KNX 0% corresponds to WMS (min) [-75

KNX 100% corresponds to WMS (max) [75

Activate object DPT 240 for combined blind length and slat position

Abb. 7 Parameter dialogue: WMS on: output → product parameter



Specific parameters such as the channel number, tilt angle, etc. must match with the WMS parameterisation. Execute the *export parameter* function in the *project* menu in WMS studio pro. All WMS parameters required for the KNX-side parameterisation are included in the PDF and CSV provided.

6.3.2.1 Venetian blind / external venetian blind

To ensure that the device converts correctly between the KNX slat position and the WMS slat angle, both the minimum and maximum tilt angle must be specified.

Parameter	Function	Values
Product type	Select the slat type used for your product type here. WAREMA products can be selected by type in the menu. The corresponding minimum and maximum tilt angles are automatically entered in the following two menu lines. Select "User-defined" here for third-party manufacturers. The tilt angle must then be entered in the following two menu lines as defined in the WMS project.	User-defined
		Beaded slats E 60 A2 S E 60 A6 S (WAREMA)
		Flat slats E 60 AF E 60 AF A6 (WAREMA)
		Dim-out slats E 73 A2 E 73 A6 (WAREMA)
		Zetra dim-out slats E 80 A6 Z (WAREMA)
		Beaded slats E 80 A2 S E 80 A6 S (WAREMA)
		Flat slats E 80 AF E 80 AF A6 (WAREMA)
		Flat slats (special tilt) E 80 AF E 80 AF A6 (WAREMA)
		Flat slats E 100 AF E 100 AF A6 (WAREMA)
		Dim-out slats E 90 A2 E 90 A6 E 93 A2 E 93 A6 (WAREMA)
KNX 0% corresponds to WMS (min) [°]	Minimum tilt angle (value as parameterised in the WMS project)	-90 : -75 : 90
KNX 100% corresponds to WMS (max) [°]	Maximum tilt angle (value as parameterised in the WMS project)	-90 : 75 : 90
Activate object DPT 240 for combined blind length and slat position	Activate this special 3-byte data point type if it is required in your KNX project. The relevant group objects are displayed.	On
		Off

6.3.2.2 Awning

Parameter	Function	Values
A controllable valance roller blind exists	Activate this option if the awning has a valance roller blind that can be operated from the WMS. The relevant group objects are displayed.	On
		Off

6.3.2.3 Slat roof

Parameter	Function	Values
Tilt only	Activate this parameter if you would like to control a La-maxa L50 or L60 slat roof. The group objects that are not needed for moving the slats are hidden.	On
		Off
Activate object DPT 240 for combined blind length and slat position	Activate this special 3-byte data point type if it is required in your KNX project. The relevant group objects are displayed.	On
		Off

6.3.2.4 Light

Parameter	Function	Values
Function mode	Select whether switching on and off or dimming is also required (the function type must correspond to the WMS product). Additional required group objects are displayed for the dimming function type.	Switching
		Dimming

6.3.2.5 Radiant heater

Parameter	Function	Values
Function mode	Select whether switching on and off or dimming is also required (the function type must correspond to the WMS product). Additional required group objects are displayed for the dimming function type.	Switching
		Dimming

6.3.2.6 Switching

Parameter	Function	Values
	no product-specific parameters	

6.3.3 Scenarios

Scenarios for the individual output channels are configured in the ETS. If a scenario is called up in KNX, the relevant channels are then controlled in the WMS.

Scenarios configured in WMS can be triggered from the KNX side.



The scenarios for all product types can be found in the table. Depending on the product type selected, some parameters and group objects may be omitted.

Device parameters	Scene 1	
Status texts	Scene 1 active	☒
WMS O1: Output	Scene name	Scene 1
Product parameters	Scene number	1
Scenes	Blind length [%]	0
Status	Slat position [%]	0
Safety	Scene 2	
	Scene 2 active	☐
	Scene 3	
	Scene 3 active	☐

Abb. 8 Parameter dialogue: WMS on: output → scenarios

Parameter	Function	Values
Scenario <i>n</i> active (8 scenarios may be defined)	Specifies whether the scenario should be used.	Do not use
		Use
Scenario name	Text as designation of the scenario (purely for information). The text may have a maximum of 30 characters.	Scenario <i>n</i>
Scenario number	Scenario number that must be received on GO Scenarios of the output for the scenario to be executed. Each scenario number may only be used once per output.	1 : 64
Blind length [%]	Blind length to which the blind is moved when the scenario is activated.	0 : 100
Slat position [%]	Slat position to which the blind is moved when the scenario is activated.	0 : 100
Position [%]	Position to which it is moved when the scenario is activated.	0 : 100
Dimming value [%]	Dimming value sent when the scenario is activated.	0 : 100
Behaviour	Switching on or off	Switch on
		Switch off

6.3.4 Status

When and how often status information from the WMS network is evaluated, is determined in the status menu.

Status actual values

Current status of the receiver controlled. How often the actual values are up-dated can be selected individually for each output.

Status WMS

The group objects *WMS status bit* and *WMS status text* are available for each output.

WMS status bit generally signals whether there is a blockage in the WMS receiver.

WMS status text issues the text defined in the *status texts* menu when the relevant status is entered (see section 6.2 on page 20).

If the objects are activated, the transmission behaviour can also be set.

Device parameters

Status texts

WMS O1: Output

Product parameters

Scenes

Status

Safety

Status actual values

Update of the actual valuesWhile execution

Status WMS

Activate objects for the WMS status☒

Send behaviourDo not send, readable

Abb. 9 Parameter dialogue: WMS on: output → status

Parameter	Function	Values
Update of the actual values	The frequency of status object updates for the actual values is set here. The cyclical transmission of status objects can optionally be activated for different time intervals.	During execution
		During execution and cyclically every 20 minutes
		During execution and cyclically every 10 minutes
		During execution and cyclically every 5 minutes
		During execution and cyclically every 2 minutes
		During execution and cyclically every minute
Prepare objects for the WMS status	Determines whether group objects should be used for status messages from the WMS network.	Yes
Transmission behaviour	The transmission behaviour for WMS status objects is set here. The cyclical transmission of status objects can optionally be activated for different time intervals.	No
		Do not transmit, readable
		In case of change
		In case of change and every 15 minutes
		In case of change and every 5 minutes
		In case of change and every minute

6.3.5 Safety

The safety object and the disable/enable object are available separately for each output. The response to an alarm on a safety object or a disable/enable object should be parameterised individually for each output.



The disable/enable object only affects the KNX side, it has no effect on the operator processes in the WMS network. The operation of products by the WMS transmitter must be prevented directly on the WMS side.

Device parameters

Status texts

WMS O1: Output

Product parameters

Scenes

Status

Safety

Safety object

Behaviour on alarm start event by safety object

Not used

Send WMS central command

Behaviour on alarm end event by safety object

Not used

Release WMS central command

Cyclic monitoring

If cyclic monitoring is activated, the device expects a regular update of the security object. If the KNX telegram is not received for the configured time, what is parameterized under "Behaviour on alarm start event by safety object" is executed.

Monitoring interval

Cyclical monitoring off

Bus voltage monitoring

Behaviour after bus voltage recovery or reset

No change

Enable/disable manual operation

Depending on the selection, direct or inverse logic will be used. If disable is activated, received KNX commands are not forwarded via WMS. The disabling acts purely on the KNX side and does not influence the WMS components.

Show disable/enable object

Disable object

Abb. 10 Parameter dialogue: WMS on: output → safety

Parameter	Function	Values
Behaviour on alarm start event by safety object	If the alarm is active (1) on the safety object, the WMS central command is transmitted. The WMS receivers respond to the central command as parameterised in WMS studio pro. Manual operation of the WMS receiver is disabled.	Not used
		Transmit WMS central command
Behaviour on alarm end event by safety object	The WMS central command is cancelled again when the alarm on the safety object ends (0). The WMS receivers respond to the central command as parameterised in WMS studio pro. The WMS receivers can be operated manually again.	Not used
		Release WMS central command
Cyclical monitoring Monitoring interval	Monitors whether telegrams are received on the GO safety of the output. The GO safety of the channel must receive at least one telegram within this time period. If this time elapses without a telegram having been received, what is parameterised under Alarm active behaviour is carried out by the safety object.	Cyclical monitoring off
		20 seconds
		1 minute
		2 minutes
		5 minutes
		10 minutes
Behaviour after bus voltage recovery or reset	This parameter determines the behaviour of the GO safety after the mains voltage returns.	No change
		Activate alarm
		Deactivate alarm
Enable/disable manual operation	Show disable/enable object If disable is activated, received KNX commands are not forwarded via WMS. The blockage acts solely on the KNX side and does not influence the WMS components.	Not used
		Enable object
		Disable object

7 Group objects

The KNX converter WMS has several group objects (GO). Depending on the parameter setting (e.g. product type), the group objects available in each case are shown on the ETS interface.

7.1 Overview

The following table includes all group objects with the associated specifications as an example for one output (here output 1). Depending on the parameterisation, there are 2 to 25 identical outputs available for the outputs.

No.	Name	Object function	Length	Flags	Data type
1	Device	Device available	1 bit	C, R, T	1-bit, 1,002 Boolean
2	Device	Diagnostics	14 bytes	C, R	Character set, 16,001 characters (ISO 8859-1)
10	WMS O1: Output	Up/down move command (venetian blind/external venetian blind)	1 bit	C, W	1-bit, 1,008 up/down
11	WMS O1: Output	Stop/start move command (venetian blind/external venetian blind)	1 bit	C, W	1-bit, 1,007 step
12	WMS O1: Output	Move to blind length (venetian blind/external venetian blind)	1 byte	C, W	8-bit unsigned, 5,001 percent (0...100%)
13	WMS O1: Output	Status blind length (venetian blind/external venetian blind)	1 byte	C, R, T	8-bit unsigned, 5,001 percent (0...100%)
14	WMS O1: Output	Awning up/down move command	1 bit	C, W	1-bit, 1,008 up/down
15	WMS O1: Output	Awning stop/start move command	1 bit	C, W	1-bit, 1,007 step
16	WMS O1: Output	Move awning to blind length	1 byte	C, W	8-bit unsigned, 5,001 percent (0...100%)
17	WMS O1: Output	Awning status blind length	1 byte	C, R, T	8-bit unsigned, 5,001 percent (0...100%)
18	WMS O1: Output	Up/down move command (roller shutter/textile sun shading systems)	1 bit	C, W	1-bit, 1,008 up/down
19	WMS O1: Output	Stop/start move command (roller shutter/textile sun shading systems)	1 bit	C, W	1-bit, 1,007 step
20	WMS O1: Output	Move to blind length (roller shutter/textile sun shading systems)	1 byte	C, W	8-bit unsigned, 5,001 percent (0...100%)
21	WMS O1: Output	Status blind length (roller shutter/textile sun shading systems)	1 byte	C, R, T	8-bit unsigned, 5,001 percent (0...100%)
22	WMS O1: Output	Open/close move command (slat roof)	1 bit	C, W	1-bit, 1,009 open/close
23	WMS O1: Output	Stop/start move command (slat roof)	1 bit	C, W	1-bit, 1,007 step
24	WMS O1: Output	Move to position (slat roof)	1 byte	C, W	8-bit unsigned, 5,001 percent (0...100%)
25	WMS O1: Output	Status position (slat roof)	1 byte	C, R, T	8-bit unsigned, 5,001 percent (0...100%)
26	WMS O1: Output	Move to slat position (venetian blind/external venetian blind)	1 byte	C, W	8-bit unsigned, 5,001 percent (0...100%)
27	WMS O1: Output	Status slat position (venetian blind/external venetian blind)	1 byte	C, R, T	8-bit unsigned, 5,001 percent (0...100%)
28	WMS O1: Output	Move to slat position (slat roof)	1 byte	C, W	8-bit unsigned, 5,001 percent (0...100%)
29	WMS O1: Output	Status slat position (slat roof)	1 byte	C, R, T	8-bit unsigned, 5,001 percent (0...100%)
30	WMS O1: Output	Move to blind length and slat position (venetian blind/external venetian blind, DPT 240 active)	3 bytes	C, W	Positions, 240,800 combined positions
31	WMS O1: Output	Status blind length and slat position (venetian blind/external venetian blind, DPT 240 active)	3 bytes	C, R, T	Positions, 240,800 combined positions

No.	Name	Object function	Length	Flags	Data type
32	WMS O1: Output	Move to position and slat position (slat roof, DPT 240 active)	3 bytes	C, W	Positions, 240,800 combined positions
33	WMS O1: Output	Status position and slat position (slat roof, DPT 240 active)	3 bytes	C, R, T	Positions, 240,800 combined positions
34	WMS O1: Output	Valance roller blind up/down move command (awning)	1 bit	C, W	1-bit, 1,008 up/down
35	WMS O1: Output	Valance roller blind stop/start move command (awning)	1 bit	C, W	1-bit, 1,007 step
36	WMS O1: Output	Move valance roller blind to blind length (awning)	1 byte	C, W	8-bit unsigned, 5,001 percent (0...100%)
37	WMS O1: Output	Valance roller blind status blind length (awning)	1 byte	C, R, T	8-bit unsigned, 5,001 percent (0...100%)
38	WMS O1: Output	Awning + VR up/down move command	1 bit	C, W	1-bit, 1,008 up/down
39	WMS O1: Output	Awning + VR stop/start move command	1 bit	C, W	1-bit, 1,007 step
40	WMS O1: Output	Move awning + VR to blind length	1 byte	C, W	8-bit unsigned, 5,001 percent (0...100%)
41	WMS O1: Output	Switching (switching the lights)	1 bit	C, W	1-bit, 1,001 switch
42	WMS O1: Output	Status switching (switching the lights)	1 bit	C, R, T	1-bit, 1,001 switch
43	WMS O1: Output	Switching (switching the radiant heater)	1 bit	C, W	1-bit, 1,001 switch
44	WMS O1: Output	Status switching (switching the radiant heater)	1 bit	C, R, T	1-bit, 1,001 switch
45	WMS O1: Output	Switching	1 bit	C, W	1-bit, 1,001 switch
46	WMS O1: Output	Status switching (switching)	1 bit	C, R, T	1-bit, 1,001 switch
47	WMS O1: Output	Switching (dimming the light)	1 bit	C, W	1-bit, 1,001 switch
48	WMS O1: Output	Dimming (relative) (dimming the light)	4 bit	C, W	3-bit controlled, 3,007 dimmer step
49	WMS O1: Output	Brightness value (dimming the light)	1 byte	C, W	8-bit unsigned, 5,001 percent (0...100%)
50	WMS O1: Output	Status switching (dimming the light)	1 bit	C, R, T	1-bit, 1,001 switch
51	WMS O1: Output	Status brightness value (dimming the light)	1 byte	C, R, T	8-bit unsigned, 5,001 percent (0...100%)
52	WMS O1: Output	Switching (dimming the radiant heater)	1 bit	C, W	1-bit, 1,001 switch
53	-	-	-	-	-
54	WMS O1: Output	Power value (dimming the radiant heater)	1 byte	C, W	8-bit unsigned, 5,001 percent (0...100%)
55	WMS O1: Output	Status switching (dimming the radiant heater)	1 bit	C, R, T	1-bit, 1,001 switch
56	WMS O1: Output	Status power value (dimming the radiant heater)	1 byte	C, R, T	8-bit unsigned, 5,001 percent (0...100%)
57	WMS O1: Output	Scenarios	1 byte	C, W	8-bit unsigned, 17,001 scenario number
58	WMS O1: Output	Status WMS bit	1 bit	C, R, T	1-bit, 1,005 Alarm
59	WMS O1: Output	Status WMS text	14 bytes	C, R, T	Character set, 16,001 characters (ISO 8859-1)
60	WMS O1: Output	Safety	1 bit	C, R, W, T	1-bit, 1,005 Alarm
61	WMS O1: Output	Enable	1 bit	C, W	1-bit, 1,003 Enable
62	WMS O1: Output	Disable	1 bit	C, W	1-bit, 1,003 Enable



The outputs 2 to 25 have the same group objects as output 1 (with relevant continuous GO numbers).

7.2 Group objects in detail

Below you will find a function description of the group objects used, as well as the possible values. In the column "Must be enabled" you will find the prerequisites for the respective group object to be activated and displayed in the ETS.

7.2.1 Group objects for the device

Name	Object function	Values	Must be enabled in the parameter dialogue
Device	The GO device signals whether the device is ready for operation. The output can be issued once or cyclically.	0 or 1 It is determined via device parameters \ object "Device available" \ object value	Device parameters \ object "Device available" \ prepare object "Device available" = yes
Diagnostics	The GO diagnostics provide information on the last state or process of the device. The GO can be read as soon as the KNX converter WMS is supplied with voltage. If the "secure" device is operated, not all devices in the GO position may be able to be read.	Text See the following table	Always enabled

Diagnostics messages

 0/0/4 diag No No Char (ISO 8859-1) 14 bytes 1 57 4D 53 5F 52 45 53 50 5F 32 20 20 20 20 WMS_RESP_2

Abb. 11 Example diagnostics message (displayed in the ETS)

Message	Interpretation
STARTUP	The start process is not yet complete. A potential programmed delayed start has not yet begun.
READY	The device has been started and any parameterised delayed start has already begun.
LOCKED	Manual operation has been disabled via the disable or enable object.
UNLOCKED	Manual operation has been enabled via the disable or enable object.
BLOCKED	An attempt has been made to operate during an active operation lock.
WMS_WINK	A WMS identification command has been transmitted to the device.
WMS_REQ_ch	A WMS enquiry has been transmitted.
WMS_RESP_ch	A WMS response has been received.
WMS_NO_ACK_ch	The WMS system reports an error. This can be caused by the following: - Error during commissioning - Limited/no radio range
WMS_TIMEOUT_ch	The last WMS error was not answered by the WMS receiver. This can be caused by the following: - Not switched on - No power supply - Error during commissioning - Limited/no radio range



"_ch" represents the relevant output of the KNX converter WMS.

7.2.2 Group objects for the outputs

7.2.2.1 Group objects for all outputs

Name	Object function	Values	Must be enabled in the parameter dialogue
Scenarios	Executing scenarios	1...64 = Scenario number	The scenarios must be activated and set accordingly in the parameter dialogue
Status WMS bit	Indicates whether the WMS receiver controlled by this output is blocked on the WMS side. Transmission behaviour is parameterised by: WMS on: output \ status \ transmission behaviour	0 = no blocking 1 = blocking active	WMS on: output / status / prepare objects for the WMS status = yes
Status WMS text	This GO indicates the current status of the WMS receiver controlled by this output. Transmission behaviour is parameterised by: WMS on: output \ status \ transmission behaviour	Text as defined in the status texts menu	WMS on: output / status / prepare objects for the WMS status = yes
Safety	Once the GO has received a telegram, the action parameterised under WMS on: safety / safety object is triggered.	0 = No alarm 1 = Alarm	
Enable	Enables all movements of the channel	0 = Disable 1 = Enabled	<i>Enable object</i> must be parameterised under WMS on: output / safety / enable/disable operation.
Disable	Stops and locks all movements of the channel.	0 = Enabled 1 = Disable	<i>Disable object</i> must be parameterised under WMS on: output / safety / enable/disable operation.

7.2.2.2 Group objects for venetian blind/external venetian blind

Name	Object function	Values	Must be enabled in the parameter dialogue
Up/down move command	If this GO receives a telegram with the value 0, the sun shading product is raised. If a telegram with the value 1 is received, the sun shading product is lowered.	0 = UP 1 = DOWN	
Stop/step move command	If this GO receives a telegram, a moving slat is stopped. In the <i>Venetian blind/external venetian blind</i> operating mode, a step command is executed for a stationary sun shading product.	0 = STOP/Open tilting 1 = STOP/close tilting	
Move to blind length	If a telegram is received on this GO, the sun shading product moves to the height that corresponds to the received value. Once the target position is reached, the slats assume the same position they had before the movement.	0% (top) ...100% (bottom)	
Blind length status	Transmits the current height of the sun shading product. Transmission behaviour is parameterised by: WMS on: output \ status \ updated actual values	0% (top) ...100% (bottom)	
Move to slat position	If a telegram is received on this GO, the slats are positioned in accordance with the received value.	0% (slat OPEN) ...100% (slat CLOSED)	
Actual slat position	Transmits the current slat position of the sun shading product. Transmission behaviour is parameterised by: WMS on: output \ status \ updated actual values	0% (slat OPEN) ...100% (slat CLOSED)	
Move to blind length and slat position	If a telegram is received on this GO, the sun shading product moves to the height that corresponds to the received value. Once the target position is reached, the slats assume the position included in the GO.	Object DPT 240: 0% (top) ...100% (bottom) (0% (slat OPEN) ...100% (slat CLOSED)	DPT 240 active

Name	Object function	Values	Must be enabled in the parameter dialogue
Status blind length and slat position	Transmits the current slat length and the slat position of the sun shading product. Transmission behaviour is parameterised by: WMS on: output \ status \ updated actual values	Object DPT 240: 0% (top) ...100% (bottom) (0% (slat OPEN) ...100% (slat CLOSED)	DPT 240 active

7.2.2.3 Group objects for awning

Name	Object function	Values	Must be enabled in the parameter dialogue
Awning up/down move command	If this GO receives a telegram with the value 0, the sun shading product is raised. If a telegram with the value 1 is received, the sun shading product is lowered.	0 = UP 1 = DOWN	
Awning stop/start move command	If this GO receives a telegram, a moving slat is stopped.	0 = STOP 1 = STOP	
Move awning to blind length	If a telegram is received on this GO, the sun shading product moves to the height that corresponds to the received value.	0% (top) ...100% (bottom)	
Awning status blind length	Transmits the current height of the sun shading product. Transmission behaviour is parameterised by: WMS on: output \ status \ updated actual values	0% (top) ...100% (bottom)	
Valance roller blind up/down move command	If this GO receives a telegram with the value 0, the sun shading product is raised. If a telegram with the value 1 is received, the sun shading product is lowered.	0 = UP 1 = DOWN	Product parameter / "A controllable valance roller blind is present" must be activated
Valance roller blind stop/start move command	If this GO receives a telegram, a moving slat is stopped.	0 = STOP 1 = STOP	Product parameter / "A controllable valance roller blind is present" must be activated
Move valance roller blind to blind length	If a telegram is received on this GO, the sun shading product moves to the height that corresponds to the received value.	0% (top) ...100% (bottom)	Product parameter / "A controllable valance roller blind is present" must be activated
Valance roller blind status blind length	Transmits the current height of the sun shading product. Transmission behaviour is parameterised by: WMS on: output \ status \ updated actual values	0% (top) ...100% (bottom)	Product parameter / "A controllable valance roller blind is present" must be activated
Awning + VR up/down move command	If this GO receives a telegram with the value 0, first the valance roller is raised and then the awning. If a telegram with the value 1 is received, first the awning is lowered and then the valance roller blind.	0 = UP 1 = DOWN	Product parameter / "A controllable valance roller blind is present" must be activated
Awning + VR stop/start move command	If this GO receives a telegram, a moving slat is stopped.	0 = STOP 1 = STOP	Product parameter / "A controllable valance roller blind is present" must be activated
Move awning + VR to blind length	If this GO receives a telegram, first the valance roller blind is retracted, then the awning position is approached, and the valance roller blind is put back into its original position.	0% (top) ...100% (bottom)	Product parameter / "A controllable valance roller blind is present" must be activated

7.2.2.4 Group objects for roller shutters/textile sun shading systems

Name	Object function	Values	Must be enabled in the parameter dialogue
Up/down move command	If this GO receives a telegram with the value 0, the sun shading product is raised. If a telegram with the value 1 is received, the sun shading product is lowered.	0 = UP 1 = DOWN	
Stop/step move command	If this GO receives a telegram, a moving slat is stopped.	0 = STOP 1 = STOP	
Move to blind length	If a telegram is received on this GO, the sun shading product moves to the height that corresponds to the received value.	0% (top) ...100% (bottom)	

Name	Object function	Values	Must be enabled in the parameter dialogue
Blind length status	Transmits the current height of the sun shading product. Transmission behaviour is parameterised by: WMS on: output \ status \ updated actual values	0% (top) ...100% (bottom)	

7.2.2.5 Group objects for slat roof

Name	Object function	Values	Must be enabled in the parameter dialogue
Open/close move command	If this GO receives a telegram with the value 0, the roof is opened. If a telegram with the value 1 is received, the roof is then closed.	0 = Open 1 = Close	
Stop/step move command	If this GO receives a telegram, a moving slat is stopped. In the <i>slat roof</i> operating mode, a step command is executed for a stationary sun shading product.	0 = STOP/open tilting 1 = STOP/close tilting	
Move to position	If this GO receives a telegram, the sun shading product is moved to the position that corresponds to the received value. Once the target position is reached, the slats assume the same position they had before the movement.	0% (open) ...100% (closed)	"Tilt only" cannot be selected
Status position	Transmits the current position of the sun shading product. Transmission behaviour is parameterised by: WMS on: output \ status \ updated actual values	0% (open) ...100% (closed)	"Tilt only" cannot be selected
Move to slat position	If a telegram is received on this GO, the slats are positioned in accordance with the received value.	0% (slat OPEN) ...100% (slat CLOSED)	
Status slat position	Transmits the current slat position of the slat roof. Transmission behaviour is parameterised by: WMS on: output \ status \ updated actual values	0% (slat OPEN) ...100% (slat CLOSED)	
Move to position and slat position	If this GO receives a telegram, the slat roof then moves to the position that corresponds to the received value. Once the target position is reached, the slats assume the position included in the GO.	Object DPT 240: 0% (open) ...100% (closed) (0% (slat OPEN) ...100% (slat CLOSED)	DPT 240 active
Status position and slat position	Transmits the current position and the slat position of the slat roof. Transmission behaviour is parameterised by: WMS on: output \ status \ updated actual values	Object DPT 240: 0% (open) ...100% (closed) (0% (slat OPEN) ...100% (slat CLOSED)	DPT 240 active

7.2.2.6 Group objects for light

Name	Object function	Values	Must be enabled in the parameter dialogue
Switching	If this GO receives a telegram, the light is then switched on or off.	0 = OFF 1 = ON	
Dimming (relative)	Makes the relative dimming of the light possible. Due to limitations with the WMS system, not all KNX operating options can be offered: Limitations with start-stop dimming: the 100% value cannot be reached. Limitations with step dimming: the step size cannot be varied.	c = 0/1 (rising/falling) StepCode = 0/1...6/7 (stop/step/start)	Product parameter / function type "Dim"
Brightness value	If this GO receives a telegram, the brightness value that corresponds to the received value is then set.	0% (off) ...100% (maximum brightness)	Product parameter / function type "Dim"
Status switching	Transmits the current switching state of the light. Transmission behaviour is parameterised by: WMS on: output \ status \ updated actual values	0 = OFF 1 = ON	

Name	Object function	Values	Must be enabled in the parameter dialogue
Status brightness value	Transmits the current brightness value of the light. Transmission behaviour is parameterised by: WMS on: output \ status \ updated actual values	0% (off) ...100% (maximum brightness)	Product parameter / function type "Dim"

7.2.2.7 Group objects for radiant heater

Name	Object function	Values	Must be enabled in the parameter dialogue
Switching	If this GO receives a telegram, the radiant heater is then switched on or off.	0 = OFF 1 = ON	
Power value	If this GO receives a telegram, the power that corresponds to the received value is then set. The power values 0%, 33%, 66% and 100% are supported by the WMS receiver.	0% (off) 33% 66% 100%	Product parameter / function type "Dim"
Status switching	Transmits the current switching state of the radiant heater. Transmission behaviour is parameterised by: WMS on: output \ status \ updated actual values	0 = OFF 1 = ON	
Actual power value	Transmits the current power value of the radiant heater. Transmission behaviour is parameterised by: WMS on: output \ status \ updated actual values	0% (off) 33% 66% 100%	Product parameter / function type "Dim"

7.2.2.8 Group objects for switching

Name	Object function	Values	Must be enabled in the parameter dialogue
Switching	If this GO receives a telegram, the device is then switched on or off.	0 = OFF 1 = ON	
Status switching	Transmits the current switching status of the device. Transmission behaviour is parameterised by: WMS on: output \ status \ updated actual values	0 = OFF 1 = ON	

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