KNX RF-MSG-DST
Radio actuator

Item number 70712

Installation and Adjustment

Installation, inspection, commissioning and troubleshooting of the device must only be carried out by a competent electrician.

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.

☐ "Control unit"
The symbol is followed by a menu path. In this menu the settings just described can be changed.

📖 "Manual"
The symbol is followed by chapter information with a page number. In this chapter you will find additional information about the setting just described.

1. Description

The **KNX RF-MSG-DST** is a radio actuator for KNX radio (KNX RF). The actuator controls one drive (blind, shutter, awning or window). Via an additional connector, another motor control unit is supplied with power (loop-through function).

The **KNX RF-MSG-DST** uses the KNX RF S standard.

Functions:
- 1 connection for 230 V-drive (STAK3)
- 1 output 230 V AC (STAK3) for supply of further motor control units
- Reception of the control signal via radio KNX RF
- **Retransmitter function** (from version 1.1): Forwarding of all received KNX RF telegrams. These can be received by KNX RF participants with the same domain address. This allows the range of the KNX RF signal to be increased
- **Automatic runtime measurement** of the drives for positioning (incl. fault reporting object)
- **Position feedback** (movement position, also slat position for shutters)
- **Position storage** (movement position) via 1-bit object (storage and call-up e.g. via buttons)
- **Scene control** for movement position with 16 scenes per drive (also slat position for shutters)
- **Blocking objects and alarm reports** have different priorities, so safety functions always take precedence (e.g. wind block)
- Manual or automatic priority setting via time or communication object
- **Brief time limit** (movement command blocked) and **2 movement limits**

Configuration is made using the KNX software ETS 5. The **product file** can be downloaded from the ETS online catalogue and the Elsner Elektronik website on **www.elsner-elektronik.de** in the "Service" menu.

1.0.1. Scope of delivery

- Actuator
- Magnet for teaching procedure (telescopic rod)
- Rubber seal

Available accessories:

- Mains connection wire (5 m)
- Connection wire (available in 1 m; 2,5 m; 5 m)

1.1. Technical Data

Housing	Plastic
Protection category	IP 54*
Dimensions	approx. 149 x 72 x 29 (W x H x D, mm)
Weight	approx. 168 g
Ambient temperature	Operation -25…+70 °C, storage -30…+85°C

Ambient humidity	max. 95% RH, avoid condensation
Operating voltage	230 V AC
Input	STAS3 plug (230 V)
Output	1 x 230 V AC (loop-through), STAK3 coupling, max. 1.5 kW switch-on load per mains connection 1 × drive, STAK3 coupling, 230 V AC (up/down/N/PE), loadable to max. 4 A / 230 V AC
Communication objects	52
Assignments	max. 1024
Radio frequency	868,3 MHz

*The **Radio actuator KNX RF-MSG-DST** should be installed in a protected area despite a high protection category because water can enter in via the connectors. Please observe the instructions in Chapter *Connection*.

The product conforms with the provisions of EU directives.

2. Installation and start-up

2.1. Installation notes

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

DANGER!
Risk to life from live voltage (mains voltage)!
There are unprotected live components within the device.
- VDE regulations and national regulations are to be followed.
- Ensure that all lines to be assembled are free of voltage and take precautions against accidental switching on.
- Do not use the device if it is damaged.
- Take the device or system out of service and secure it against unintentional use, if it can be assumed, that risk-free operation is no longer guaranteed.

The device is only to be used for its intended purpose. Any improper modification or failure to follow the operating instructions voids any and all warranty and guarantee claims.

After unpacking the device, check it immediately for possible mechanical damage. If it has been damaged in transport, inform the supplier immediately.

The device may only be used as a fixed-site installation; that means only when assembled 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.

2.1.1. Safety advice

⚠️ **WARNING!**
**Risk of injury caused by components moved automatically!**
If the wireless connection between the control unit and the wireless actuator is interrupted, connected devices can no longer be operated.
- For that reason do not connect drives to the wireless actuator which could be hazardous to human life!

2.2. Notes on wireless equipment

When planning facilities with devices that communicate via radio, adequate radio reception must be guaranteed. The range will be limited by legal regulation and structural circumstances. Avoid sources of interference and obstacles between receiver and transmitter, that could disturb the wireless communication. Those would be for example:

- Walls and ceilings (especially concrete and solar protection glazing).
- Metal surfaces next to the wireless participants (e. g. aluminium construction of a conservatory).
- Other wireless devices and powerful local transmitters (e.g. wireless headphones), which transmit on the same frequency. Please maintain a minimum distance of 30 cm between wireless transmitters for that reason.
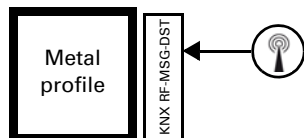
The antenna symbol on the housing shows the position of the antenna in **KNX RF-MSG-DST**. This side must not be positioned directly on metal surfaces or objects. Otherwise, the radio signal might disturbed.

Metal profile — KNX RF-MSG-DST

2.3. Connection

The radio module is connected between the appliance and the power supply. It may only be connected to flexible lines using STAK/STAS connectors. The connectors must be locked using the locking bow.
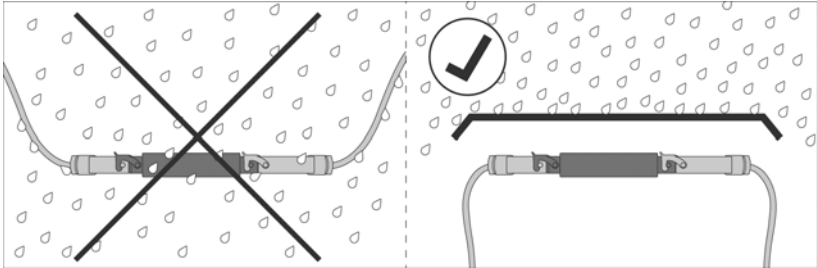
Do not expose to continuous sun radiation to avoid overheating.
The housing is not UV-resistant.
- Assembly the device in a protected area (e. g. in the box for the blinds/marquee/shutters in a construction profile beneath the roof tiles or in a housing).

🚫 **No water may run along the supply line and device** because water can enter in via the connectors**.**
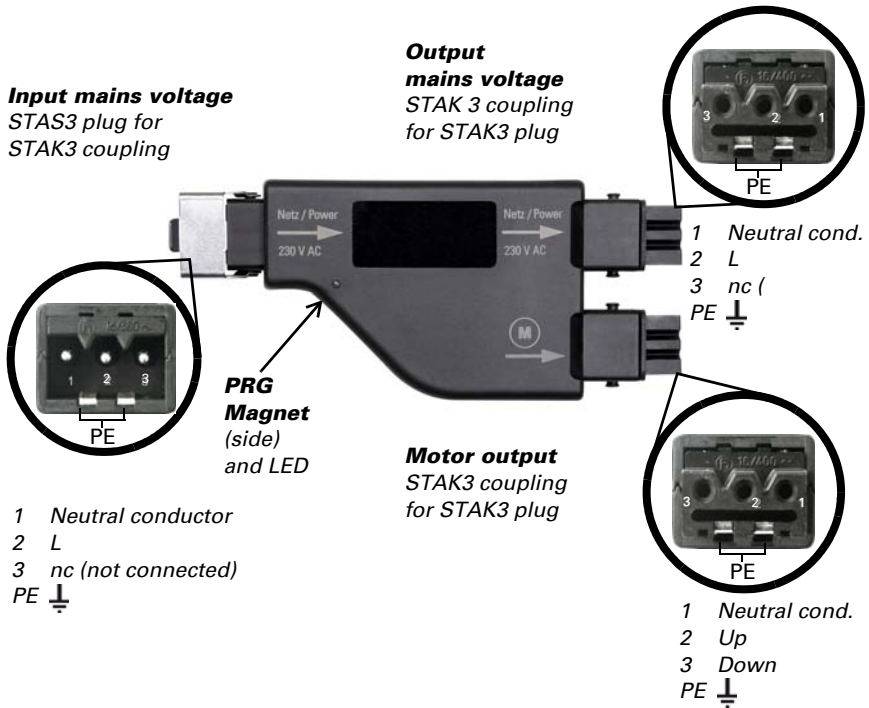

- Assembly the device in a protected area (e. g. in the box for the blinds/marquee/shutters in a construction profile beneath the roof tiles or in a housing).
- Lay the supply lines out and down from the device.

🚫 **No vibrations!**
- Assemble the device in a place that is free of vibrations.

2.3.1. Device Design

Input mains voltage
STAS3 plug for
STAK3 coupling

Output
mains voltage
STAK 3 coupling
for STAK3 plug

PE

1   Neutral cond.
2   L
3   nc (
PE ⏚

Netz / Power
230 V AC

Netz / Power
230 V AC

M

PRG
Magnet
(side)
and LED

PE

1   Neutral conductor
2   L
3   nc (not connected)
PE ⏚

Motor output
STAK3 coupling
for STAK3 plug
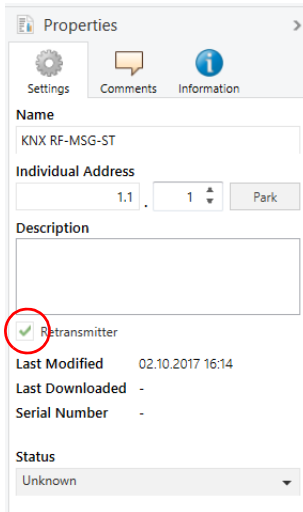
PE

1   Neutral cond.
2   Up
3   Down
PE ⏚

2.4.   Establish radio connection

The device is integrated into the KNX system with a media coupler or a KNX RF USB stick. (For further information see the corresponding manual/data sheet.)

1.   Start the programming mode of the KNX RF-MSG with the enclosed magnet (telescopic rod). The programming LED lights up.

2.5. Activate retransmitter function

If the device is set up as a retransmitter, it transmits all received KNX RF telegrams. These can be received by KNX RF participants with the same domain address. As a result, the radio range of a KNX RF system can be increased.

The function must be activated in the ETS in the property window of the device by ticking the box "Retransmitter".

Properties

Settings Comments Information

Name
KNX RF-MSG-ST

Individual Address
1.1 . 1   Park

Description

☑ Retransmitter

Last Modified   02.10.2017 16:14
Last Downloaded   -
Serial Number   -

Status
Unknown

2.6. Notes on mounting and commissioning

Device must not be exposed to water (rain). This could result in the electronic being damaged. A relative air humidity of 95% must not be exceeded. Avoid bedewing.

3. Transfer protocol

3.1. List of all communication objects

Abbreviations:
R   Read
W   Write
C   Communication
T   Transfer

No.	Name	Func-tion	Flags	Data Point Type	Size
1	Software version	Readable	R-C-	[217.1] DPT_Version	2 Bytes
100	Status automatic or manual mode	Output	R-CT	[1.1] DPT_Switch	1 Bit
101	Manual long-term	Input	RWC-	[1.8] DPT_UpDown	1 Bit
102	Manual short-term	Input	RWC-	[1.10] DPT_Start	1 Bit
103	Manual movement position	Input	RWC-	[5.1] DPT_Scaling	1 Byte
104	Manual slat position	Input	RWC-	[5.1] DPT_Scaling	1 Byte
105	Automatic mode long-term	Input	RWC-	[1.8] DPT_UpDown	1 Bit
106	Automatic mode short-term	Input	RWC-	[1.10] DPT_Start	1 Bit
107	Automatic mode movement position	Input	RWC-	[5.1] DPT_Scaling	1 Byte
108	Automatic mode slat position	Input	RWC-	[5.1] DPT_Scaling	1 Byte
109	Change from manual to automatic mode	Input	RWC-	[1.1] DPT_Switch	1 Bit
110	Automatic mode blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
111	current movement position	Output	R-CT	[5.1] DPT_Scaling	1 Byte
112	current slat position	Output	R-CT	[5.1] DPT_Scaling	1 Byte
113	Status object	Output	R-CT	[1.1] DPT_Switch	1 Bit
114	Approach position memory for manual	Input	RWC-	[1.1] DPT_Switch	1 Bit

No.	Name	Func-tion	Flags	Data Point Type	Size
115	Learn object position memory for manual 0	Input	RWC-	[1.1] DPT_Switch	1 Bit
116	Learn object position memory for manual 1	Input	RWC-	[1.1] DPT_Switch	1 Bit
119	Approach position memory for automatic	Input	RWC-	[1.1] DPT_Switch	1 Bit
120	Learn object position memory for automatic 0	Input	RWC-	[1.1] DPT_Switch	1 Bit
121	Learn object position memory for automatic 1	Input	RWC-	[1.1] DPT_Switch	1 Bit
124	Call up / saving scenes	Input	RWC-	[18.1] DPT_SceneContr ol	1 Byte
178	Drive running	Output	R-CT	[1.1] DPT_Switch	1 Bit
179	Malfunction object	Output	R-CT	[1.1] DPT_Switch	1 Bit
180	Block 1 - Blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
181	Block 1 - Wind blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
182	Block 1 - Wind blocking reading	Input	RWC-	[9.5] DPT_Value_Wsp	2 Bytes
183	Block 1 - Wind blocking status	Output	R-CT	[1.1] DPT_Switch	1 Bit
184	Block 1 - Rain blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
185	Block 2 - Blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
186	Block 2 - Wind blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
187	Block 2 - Wind blocking reading	Input	RWC-	[9.5] DPT_Value_Wsp	2 Bytes
188	Block 2 - Wind blocking status	Output	R-CT	[1.1] DPT_Switch	1 Bit
189	Block 2 - Rain blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
190	Block 3 - Blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
191	Block 3 - Wind blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
192	Block 3 - Wind blocking reading	Input	RWC-	[9.5] DPT_Value_Wsp	2 Bytes

No.	Name	Func- tion	Flags	Data Point Type	Size
193	Block 3 - Wind blocking status	Output	R-CT	[1.1] DPT_Switch	1 Bit
194	Block 3 - Rain blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
195	Block 4 - Blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
196	Block 4 - Wind blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
197	Block 4 - Wind blocking reading	Input	RWC-	[9.5] DPT_Value_Wsp	2 Bytes
198	Block 4 - Wind blocking status	Output	R-CT	[1.1] DPT_Switch	1 Bit
199	Block 4 - Rain blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
200	Block 5 - Blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
201	Block 5 - Wind blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
202	Block 5 - Wind blocking reading	Input	RWC-	[9.5] DPT_Value_Wsp	2 Bytes
203	Block 5 - Wind blocking status	Output	R-CT	[1.1] DPT_Switch	1 Bit
204	Block 5 - Rain blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
205	Movement limitation 1 - Blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
206	Movement limitation 2 - Blocking object	Input	RWC-	[1.1] DPT_Switch	1 Bit
207	Short time restriction	Input	RWC-	[1.1] DPT_Switch	1 Bit

4.   Parameter setting

The default settings of the parameter are labelled by an underscore.

4.1.   General settings

First, set the general parameters for the bus communication (transmission delay). Additionally, you can indicate if for the programming of scenes all, or only the changed settings are applied to the bus.

When labelling objects, you can enter an additional label (abbreviation) for the objects of the device, e.g. 'LR' for 'living room', to make the room installation more transparent.

Send delay of threshold values after voltage returns	5 s ... 2 h
Send delay of switching and status outputs after voltage returns	5 s ... 2 h
For the use of scenes:	
Application when programming	all parameters • only changed parameters
Object labelling	[Free text max. 20 characters]

4.2.   Operating Mode

Choose the operating mode of the drive.

Operating mode	• do not use
	• shutter
	• blind
	• awning
	• window

4.2.1. Drive - Shutter, Blind, Awning, Window

Set the general parameters for the drive.

Driving direction:
Up/down, on/off or open/close can be exchanged.

Exchange UP/DOWN *(shutter, blinds)* Exchange ON/OFF *(awning)* Exchange OPEN/CLOSE *(window)*	no • yes

Runtime:
The runtime between the end positions is the basis for moving into intermediate positions (e.g. for movement range limits and scenes). You can enter the runtime numerically (in seconds) or have the runtime determined automatically. The actuator specifies

the end positions with help from the greater current on the drive output. For this, regular reference movements (see below) should be set.

Use an automatic runtime measurement	no • yes

| Use an automatic runtime measurement	**no**
Runtime DOWN in sec *(shutter, blinds)* Runtime OFF in sec *(awning)* Runtime UP in sec *(window)*	1 … 320; 60
Runtime OPEN in sec *(shutter, blinds)* Runtime ON in sec *(awning)* Runtime CLOSE in sec *(window)*	1 … 320; 65

If a dead time is observed while starting the curtain, then this can be entered manually at this point or calculated automatically. Obey the manufacturer's instructions for the curtain.

Use dead times	• no • yes, enter by hand • yes, calculate automatically
during the position travel from closed position in 10 ms *(only for manual input)*	0 … 600
for position movement from all other positions in 10 ms *(only for manual input)*	0 … 600
for slat movement from closed position in 10 ms *(only for manual input)*	0 … 600
for movement with change of direction in 10 ms *(only for manual input)*	0 … 600
for slat movement from all other positions in 10 ms *(only for manual input)*	0 … 600

Runtime zero position and step setting of slats:
(only for shutters)

The zero position is the starting position of 0% as the initial point of movement positions. Adjusting the zero position runtime, multiple shades of a façade can be optically synchronised.
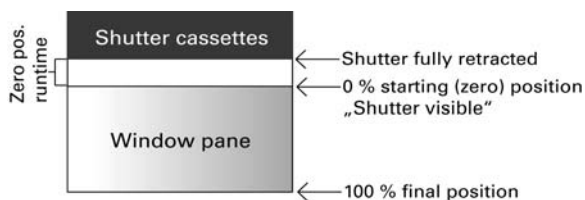
Step time x step number determines the turning time of the slats.

Runtime zero position in 0.1 sec	0 … 255

Step time in 10 ms	1 ... 100; <u>20</u>
Step number slats	1 ... 255; <u>5</u>

If the short time command for shutters (step command) is used only for slat adjustment, but not for positioning the curtain, the following parameter is set to "Yes". The parameter appears only for shutters.

Allow step commands only for slat adjustment	<u>no</u> • yes

Break time:
The required break times during a change of direction of the drive should be adjusted according to the specifications of the motor manufacturer.

Break time for a change of direction in 0.1 sec	5 ... 100; <u>10</u>

Reference movement:
With the regular movement to the two end positions the runtime is adjusted again. This is especially important for the automatic runtime determination. Therefore, it can be set here after how many movements before a positioning movement a reference movement will be performed. The reference movement is always in the direction of the secure position (retracting when shading, closing windows).

Perform a reference movement	<u>no</u> • yes

Perform a reference movement	**yes**
for more than movements before an auto positioning movement	1 ... 255; <u>10</u>

Slat turning:
(only for shutters)
The slat turning should be adjusted according to the specifications of the motor manufacturer.

Turn slats	• <u>never</u> • only after positioning movement • after each movement

Status object and drive position:
The status and current position can be sent to the bus. By sending of 1, the status object indicates that the retracted or closed position has been exited and it is suitable for example for monitoring windows.
The exact drive position can be sent on the bus if required. The variable delay ensures

that the bus is not blocked by too many data packets during a longer movement. The position can also be transmitted cyclically.

Use status object	no • yes
Use drive position feedback	no • yes
Position transmit delay after change in 0.1 s *(only for feedback)*	0...50; 10
Transmit drive position cyclically *(only for feedback)*	no • 5 s • 10 s • ... • 2 h

Scenes:
Here the scene menu is activated for this output channel.

Use scenes	no • yes

See *Scenes*, page 21.

4.3. Control

Set the behavior of the drive here.
Set the behavior after reset and download as well as the direction of reference travel.

Behavior after reset and download	• no action • Up command • Down command
Direction of reference travel	• in safe position • in closed position *(move out shading)* • in open position *(window)* • shortest route

Blocking objects:
The output channel can be blocked in case of rain, wind or other events. The manual operation is then not possible. Blocking and monitoring are configured here first. For setting the individual blocks, separate menu items "Blocking X" will appear (see chapter *Block – blocking objects*, page 17, *Block – wind blocking*, page 18 and *Block – rain blocking*, page 19).
The priorities of the blocking objects correspond to the sequence listed (Block 1 has the highest priority, Block 5 the lowest).

Use Block 1 (high priority)	• no • yes, with blocking object • yes, as wind blocking • yes, as rain blocking
Use block 2	• no • yes, with blocking object • yes, as wind blocking • yes, as rain blocking

Use block 3	• <u>no</u> • yes, with blocking object • yes, as wind blocking • yes, as rain blocking
Use block 4	• <u>no</u> • yes, with blocking object • yes, as wind blocking • yes, as rain blocking
Use Block 5 (low priority)	• <u>no</u> • yes, with blocking object • yes, as wind blocking • yes, as rain blocking
Priority is	• <u>Block 5 over Manual</u> • Manual over Block 5
Use monitoring of blocking objects	<u>No</u> • Yes
Monitoring period for blocking objects *(only if using monitoring of the blocking objects)*	5s... • 2 h; <u>5 min</u>

Behaviour if a blocking object is not received
(only if blocking object monitoring is used)
	• <u>Stop</u>
	• Up command • Down command
	  (Shutters/roller blinds)
	• On command • Off command
	  (Awnings)
	• Close command • Open command
	  (Windows)

Use movement limit 1/2:

The movement limits are activated here, and can then be configured in their own menu items. See "Movement limits" on page 20.

Short time restriction (for blinds):

If short time restriction is active, only short time movement commands are still possible manually. If the function "Allow step commands only for blind adjustment" is activated simultaneously, (siehe *Drive - Shutter, Blind, Awning, Window*, page 12) only the slats can still be adjusted by hand but no longer the movement position of the shutter. Restriction is active for object value 1.

Use short time limit	<u>no</u> • yes
Value of the object in front of 1. Communication and bus voltage restoration *(if short time restriction is used)*	<u>0</u> • 1

Automatic reset:

With the manual operation the automatic of the drive is deactivated. Here it is set when the automatic is reactivated.

Manual switches to automatic after	• expiry of a waiting period • receiving an object • expiration of a waiting period or receipt of an object
Waiting period in min *(if "Expiration of a waiting period" was chosen)*	1...255; 20
Switch to automatic for an object value *(if "Receipt of an object" was chosen)*	0 • 1 • 0 or 1

Automatic blocking object:

With the automatic blocking object, the automatic can be deactivated for a short term (e.g. if present or during speeches in conference rooms).

Use automatic blocking object	no • yes

Mode:

Here it is also specified in which mode the channel is found when the voltage returns, i.e. after a power failure. The mode (manual or automatic) is send as a status object to the bus.

Operating mode after power returns	• Automatic • Manual
Send status object	• 1 for automatic | 0 for manual • 0 for automatic | 1 for manual
Send delay of the status output Automatic or Manual in 0.1 sec	0...50

Block – blocking objects

The menu item only appears if a block with blocking object was configured for "control". Here it is specified was happens for object value 1 and 0. Via the free blocking object, a fire alarm scenario may be configured for example (create escape routes by retracting the shading, smoke extraction via windows). This can prevent being locked out on the patio (opened window contact of the patio door blocks the shutter in front of the door).

Designation	[Block 1 ... 5] Enter a designation here!
If blocking object has value =1	• no action • stop • move into position • <u>up-command</u> • down-command *(shutter/blind)* • <u>retract-command</u> • extend-command *(awning)* • <u>close-command</u> • open-command *(window)*
Position in % (only if by using a block, a specific position is achieved)	<u>0</u>...100
Slat position in % (only if by using a block, a specific shutter position is achieved)	<u>0</u>...100
If blocking object has value =0	
For manual operation before and after blocking	• <u>no action</u> • move into last position
For automatic operation after blocking	follow automatic
Value of the object before the 1st communication and bus voltage return	0...<u>1</u>

Block – wind blocking

The menu item only appears if a wind blocking was configured for "control". The input object "wind blocking" is linked with the output object of a wind sensor. The input can be a 1bit object (smaller or larger than a threshold value), as well as a 16bit object (measurement value).

Designation	[Wind blocking] Enter a designation here!
Type of input object	<u>1 bit</u> • 16 bit

1 bit input object:

Type of input object	**1 bit**
If blocking object has value =1	• no action • stop • move into position • <u>up-command</u> • down-command *(shutter/blind)* • <u>retract-command</u> • extend-command *(awning)* • <u>close-command</u> • open-command *(window)*
Position in % (only if by using a block, a specific position is achieved)	<u>0</u>...100

Slat position in % (only if by using a block, a specific shutter position is achieved)	0...100
Waiting period in secure position in min after blocking	1...255; 5
Behaviour after waiting period	
For manual operation before and after blocking	• no action • move into last position
For automatic operation after blocking	follow automatic

16 bit input object:

Type of input object	**16 bit**
As of wind speed in m/s blocking	2...30; 5
If blocking is active	• no action • stop • move into position • up-command • down-command *(shutter/blind)* • retract-command • extend-command *(awning)* • close-command • open-command *(window)*
Waiting period in secure position in min after blocking	1...255; 5
Behavior after waiting period	
For manual operation before and after blocking	• no action • move into last position
For automatic operation after blocking	follow automatic
Send current blocking status	no • yes

Block – rain blocking

The menu item only appears if a rain blocking was configured for "control". The input object "rain blocking" is linked with the output object of a rain sensor.

Designation	[rain blocking] Enter a designation here!
If blocking object has value =1	• no action • stop • move into position • up-command • down-command *(shutter/blind)* • retract-command • extend-command *(awning)* • close-command • open-command *(window)*

Position in % (only if by using a block, a specific position is achieved)	0...100
Slat position in % (only if by using a block, a specific shutter position is achieved)	0...100
Waiting period in secure position in min after blocking	1...255; <u>5</u>
Behaviour after waiting period	
For manual operation before and after blocking	• <u>no action</u> • move into last position
For automatic operation after blocking	follow automatic

Movement limits

The menu item appears only if a movement limit was activated in 'Control'. Movement limits can be used to restrict manual movement. The limit is active for object value 1.

Limitation type	• <u>completely</u> • movement position • slat angle (for shutters) • allow UP only • allow DOWN only
Value of the object in front of 1. Communication and bus voltage restoration	<u>0</u> • 1

If limiting the movement position:

Limitation type	• movement position
Movement allowed in the position range	
from (in %)	<u>0</u>...100
to (in %)	0...<u>100</u>

If limiting the slat angle (shutters only):

Limitation type	• slat angle
Movement allowed in the angle range	
from (in %)	<u>0</u>...100
to (in %)	0...<u>100</u>

4.3.1. Manual

Position memory for the manual movement can be activated here. The position set here can be overwritten via a learning object at any time. The memorised position can be retrieved again at a later time.

For shutters, both the movement and the slat position can be stored.

Use position memory	<u>no</u> • yes

Use different positions for object values 0 and 1	<u>no</u> • yes (if 'yes' is selected, there will be a division into positions for object value 0 and object value 1)
Position in %	<u>0</u>...100
Allow calling via command sequence: long-term = 1, short-term = 1	<u>no</u> • yes
Use learning object for new position	<u>no</u> • yes
Transfer when programming *(when learning object is used)*	• all parameters • changed parameters only

4.3.2. Automation – external

The position storage for automatic movement is activated here. The pre-set position can be overwritten at any time via a learning object. The memorised position can be retrieved again at a later time. For configuration options, see chapter "Manual" on page 20.

4.3.3. Scenes

A group address for scenes must be filed in the KNX system to control the scenes. The input object 'Channel X: call/save scenes' of the actuator is linked to this group address.

A scene is **called**, then the **scene number** is communicated to the actuator. The movement position saved for this scene number in the actuator is then taken.
If the scene **saving** function is used, then the current movement position is saved for this scene number in the actuator.

The 'Scenes' menu item of the actuator is only shown if 'Use scenes: yes' was selected in the settings for the drive channel. Every drive can **have up to 16 scene save points** for movement positions.

Activate a scene save point.

Use scene save point X	<u>no</u> • **yes**

Assign a scene number to the scene save point. Use this scene number to call/save the movement position stored in the actuator. Make sure that every scene number is used only once per drive channel.

Scene number	<u>0</u>...127

Set the movement position. If it is allowed to save scenes via the bus, this position only applies after the ETS download until the first manual saving. Afterwards, the new movement position saved in the actuator is used.

Shutter position in % or Blind position in % or Awning position in % or Window position in %	0...100; <u>50</u>
Slat position in % *(only for shutters)*	0...100; <u>70</u>