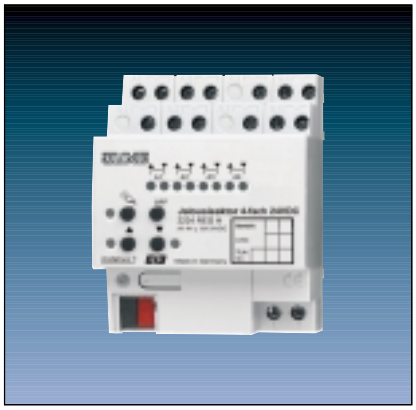
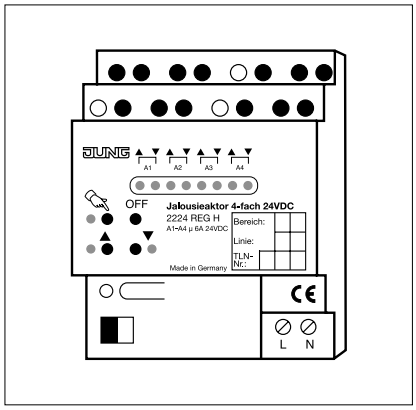
1





2

	Ref.-No.
KNX blinds actuator,	
4-gang, 24 VDC	**2224 REG H**
ETS-product family:	Shutter
Product type:	Shutter
Series embodiment (SE)-device (4 units)	

3

The blind / shutter actuator receives telegrams via the KNX and switches four mutually independent channels. Each channel can operate one drive. It is also possible to reduce the outputs to two, in order to control two drives at one output.
The actuactor offers four push-buttons for manual control. Each output can be controlled manually temporary or permanently, independent of the bus.
Additionally, the actuator offers the possibility to drive the shutter or blind and louvres to a calculated position in case of sun-protection, central function or positioning-telegrams. At the receipt of a storm report, the actuator is able to drive and lock the shutter or blind into a defined safety position.
The behaviour at bus voltage drop and return can be parameterised.

4

Technical data

Supplying	
Voltage:	21 – 32 V DC (SELV)
Power consumption:	typical 150 mW
Connection:	KNX connection block
Output	
Number:	4
Performance:	floating make-contacts
Rated voltage:	24 V AC ± 10%
Rated current:	6 A
Connection:	screw terminals: 0,2 – 4 mm^2
Protection:	IP 20
Behaviour at voltage drop and recovery:	dependent on parameters
Operation temperature:	–5°C ... +45°C
Storage temperature:	–25°C ... +70°C
Mounting:	on DIN rail 35 x 7.5

5 Description of software application

– 4 mutual independent channels, each for one drive.
– 2x2-channel operation possible
– Type of drive is adjustable (blind or shutter).
– The tracing time in case of changing the drive direction can be adjusted.
– A driving time prolongation, in order to match different driving times into the upper end position, is adjustable.
– Possibility to drive the shutter or blind and louvers into a calculated position.
– Positioning can be deactivated.
– The priority of single functions is adjustable.
– Sun protection automatic for brightness depending drive in a calculated position.
– Logical link of the sun protection objects.
– Safety function with cyclical monitoring and assignment to the channels.
– Driving into a parameterised end-position at a safety report.
– Reaction at bus voltage drop and recovery is adjustable.
– Four central functions possible at 2x2-channel operation.
– The current position of the shutter/blind can be transmitted (i.e. for visualization purposes).

Objects

Number of addresses (dynamic):	32
Number of assignments (dynamic):	32
Communication objects:	20

Operation mode: 4 x 1 channel operation

Object	Name	Function	Type	Flag
0	Output 1	Short time operation (step)	1 Bit	C, W
1	Output 2	Short time operation (step)	1 Bit	C, W
2	Output 3	Short time operation (step)	1 Bit	C, W
3	Output 4	Short time operation (step)	1 Bit	C, W
4	Output 1	Long time operation (move)	1 Bit	C, W
5	Output 2	Long time operation (move)	1 Bit	C, W
6	Output 3	Long time operation (move)	1 Bit	C, W
7	Output 4	Long time operation (move)	1 Bit	C, W
Function: Blind				
8	Position output 1 blind	Positioning	1 Byte	C, W
9	Position output 2 blind	Positioning	1 Byte	C, W
10	Position output 3 blind	Positioning	1 Byte	C, W
11	Position output 4 blind	Positioning	1 Byte	C, W
12	Position output 1 louvres	Positioning	1 Byte	C, W
13	Position output 2 louvres	Positioning	1 Byte	C, W
14	Position output 3 louvres	Positioning	1 Byte	C, W
15	Position output 4 louvres	Positioning	1 Byte	C, W
Function: Shutter				
8	Position output 1 shutter	Positioning	1 Byte	C, W
9	Position output 2 shutter	Positioning	1 Byte	C, W
10	Position output 3 shutter	Positioning	1 Byte	C, W
11	Position output 4 shutter	Positioning	1 Byte	C, W
16	Safety 1	Safety	1 Bit	C, W
17	Safety 2	Safety	1 Bit	C, W
18	Automatic 1	Sun protection	1 Bit	C, W
19	Automatic 2	Sun protection	1 Bit	C, W

5 Objects

Operation mode: 2 x 2 channel operation

Object	Name	Function	Type	Flag
0	Output 1/3	Short time operation (step)	1 Bit	C, W
1	Output 2/4	Short time operation (step)	1 Bit	C, W
2	Central 1	Central	1 Bit	C, W
3	Central 2	Central	1 Bit	C, W
4	Output 1/3	Long time operation (move)	1 Bit	C, W
5	Output 2/4	Long time operation (move)	1 Bit	C, W
6	Central 3	Central	1 Bit	C, W
7	Central 4	Central	1 Bit	C, W
Function: Blind				
8	Position output 1/3 blind	Positioning	1 Byte	C, W
9	Position output 2/4 blind	Positioning	1 Byte	C, W
12	Position output 1/3 louvres	Positioning	1 Byte	C, W
13	Position output 2/4 louvres	Positioning	1 Byte	C, W
Function: Shutter				
8	Position output 1/3 shutter	Positioning	1 Byte	C, W
9	Position output 2/4 shutter	Positioning	1 Byte	C, W
16	Safety 1	Safety	1 Bit	C, W
17	Safety 2	Safety	1 Bit	C, W
18	Automatic 1	Sun protection	1 Bit	C, W
19	Automatic 2	Sun protection	1 Bit	C, W

5 Notes to software application:

Parameter 'Positioning'
This parameter defines the position of the shutter or blinds, if the positioning function, which is, among others, necessary for the sun protection and central function, is released.
If the positioning function is released, an additional set of parameter as: 'moving time shutter', 'moving time louvres' and 'positioning' will be visible. In this case the driving time of a e. g. safety drive in one of the end positions has to be set by the parameters 'moving time shutter' and by the parameter 'driving time prolongation'.
If the positioning function is blocked, only the parameter for 'safety', 'step' and 'move' are adjustable. Now the driving time of a safety drive in one of both end positions is internally fixed at 2 minutes.

Reference drive / positioning
After a bus reset, download or after a 'move' command in none of the end positions, a reference drive (drive to the upper end position) will be carried out in general before the positioning starts.
At sun-protection, central function or positioning, a reference drive can be forced before the shutter/blind drives to the calculated position.
This helps to ensure that in case of several controlled drives each drive goes exactly to the same position even if one has been moved before by a 'step' command manually.
The time for a reference drive is fixed by the 'moving time shutter' plus the adjusted 'moving time prolongation'. After the reference drive is carried out, each output drives automatically to its calculated position.
This device has the advantage that the actual position is carried out by the positioning object of the corresponding output each time the bind or shutter has been moved.
Also the actual position is stored in the memory, even after a step command.

Bus voltage drop: tracing time at change of driving direction
At bus voltage drop and a possible change of driving direction (depending on the parameter 'behavior at bus voltage drop') a fixed tracing time of 120 ms will be kept.