



# JALOUSIE ACTUATOR

## JAS

User Manual:

JAS-04.16

JAS-08.16

Application Program: ver. 1.0

User Manual: ver. 1.0

[module-electronic.ru](http://module-electronic.ru)

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## 1 BASIC INFORMATION

The jalousie actuator is designed to control motorized curtains, jalousie, roller shutters and similar devices powered by AC. Each output has a bistable relay, designed for high inrush currents, and can be controlled manually.

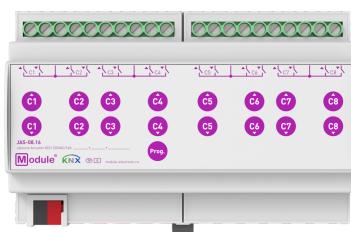
The device is available in two versions which differ by the number of independent channels:

- JAS-04.16 (4 channels);
- JAS-08.16 (8 channels).

- independent channels for a maximum capacitive load of 140µF
- Ability to connect outputs to different phases
- Manual control of outputs using front panel buttons
- LED indication of output status
- Extended logic and scenario functions for each output
- The choice of operation mode curtains / jalousie
- Saving settings during a KNX power failure
- Power supply via KNX bus
- DIN rail 35mm mounting



JAS-04.16



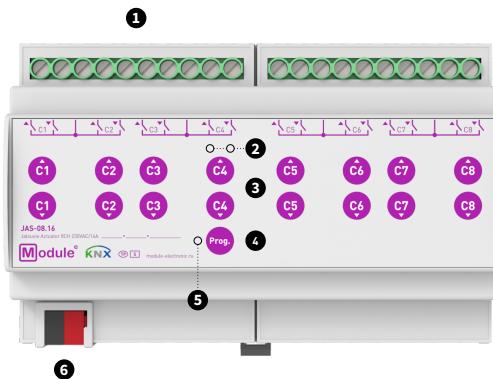
JAS-08.16

## 1.1 SPECIFICATIONS

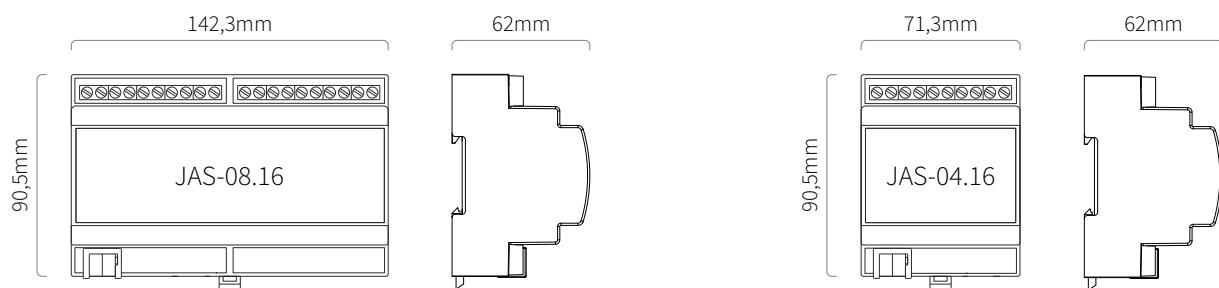
Device model	JAS-04.16	JAS-08.16
<b>Outputs (control channels)</b>		
Number of outputs	4	8
Output type / Disconnection type	Potential-free outputs-bistable relay with tungsten pre-make contact / Micro-disconnection	
Rated current per output	16A/230V AC	
Capacitive load	140µF	
Maximum switching voltage	400V AC	
Maximum load (resistive / inductive)	4000W / 1500W	
Maximum inrush current	165A/20ms 800A/200µs	
Maximum relay response time	10ms	
Cross-section of the connected wire to the screw terminals	0,5-4mm <sup>2</sup>	
Mechanical lifetime of the relay (cycles, minimum)	3.000.000	
<b>KNX interface</b>		
Specification	TP-256	
Available application software	ETS 5	
KNX connector	4-wire EIB connector (PUSH WIRE spring clips) for standard cable TP1 0,8MM Ø	
Power supply	via KNX bus	
Consumption on the KNX bus (29V DC)	< 3,9mA <113mW	< 4mA <117mW
Operation temperature	0°C .. + 45°C	
Operation humidity	5 .. 95% (no condensation)	
Degree of protection	IP 20, clean environment	
Mounting type	DIN rail 35mm	
Dimensions	71,3 x 90,5 x 62mm (4TE)	142,3 x 90,5 x 62mm (8TE)
Weight	265g	495g

## 1.2 APPEARANCE

The appearance of the actuator using the example of the JAS-08.16 model (other versions differ only in the number of channels (outputs)).



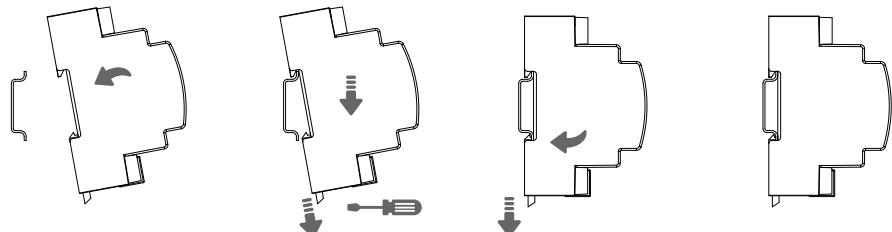
1. Outputs      2. Output status indicator LED      3. Output control button  
4. Programming button      5. Programming LED      6. KNX connector



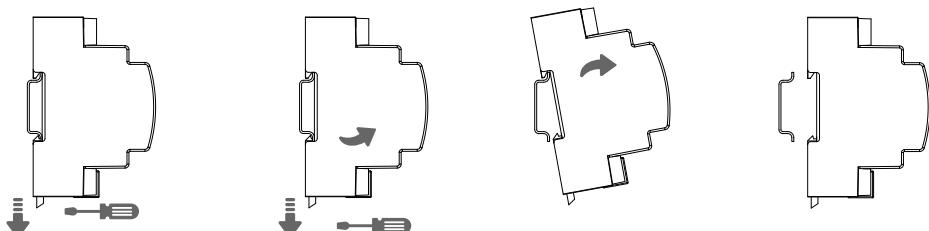
## 1.3 INSTALLATION AND CONNECTION

### INSTALLATION

Attaching to DIN rail

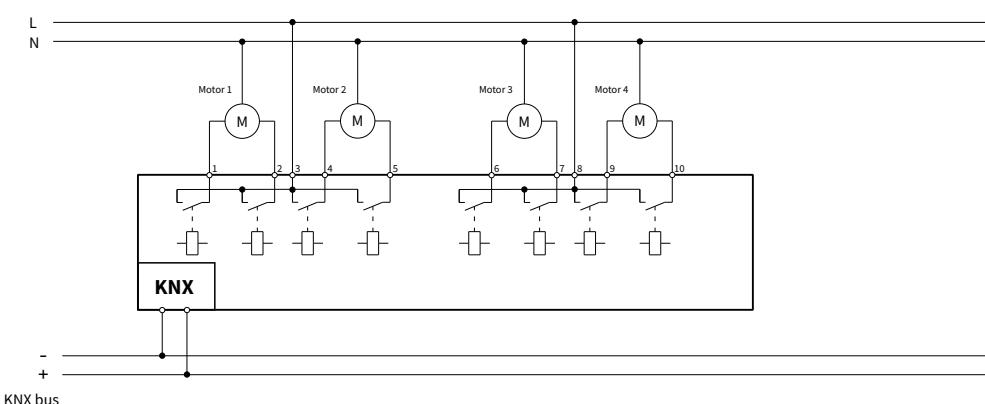


Removing from DIN rail



### WIRING DIAGRAMS

Wiring example JAS-04.16 (other versions are connected in the same way)



**ATTENTION!** Installation and connection of the device to the mains must only be carried out by qualified personnel! There is a risk of electric shock! Be sure to turn off the power before installing or removing the device! Even when the device is turned off, the output terminals can be live! Do not connect to the outputs a load that exceeds the recommended values! The design of the device meets the requirements of electrical safety according to GOST 12.2.007.0-75.



## 2 HOW TO CHOOSE A DEVICE VERSION

The option menu allows to select one of two models.



**Figure 1.** Tab «Device model»

Depending on the selected version, the corresponding number of tabs for each of the channels available in the selected version is displayed in the settings menu.

## 3 SETTINGS

The settings menu consists of a common for all channels preset tabs and individual tabs for each channel.

1.5.8 Module Electronic JAS-04/08 > Presets

Device model	Preset 1
Presets	Height (%,-1 = unchanged) 50
Channel 1: General settings	Lamellae angle (%,-1 = unchanged) 50
Channel 1: Scenes	Preset 2
Channel 2: General settings	Height (%,-1 = unchanged) -1
Channel 3: General settings	Lamellae angle (%,-1 = unchanged) 80
Channel 4: General settings	Preset 3
	Height (%,-1 = unchanged) 25
	Lamellae angle (%,-1 = unchanged) -1
	Preset 4
	Height (%,-1 = unchanged) 25
	Lamellae angle (%,-1 = unchanged) 80
Group Objects	Parameters

Figure 2. Tab «Presets»

### 3.1 PRESET 1..4

The device allows to set up to 4 presets for the position of the blinds and the inclination angle of the lamellae (in percent, from 0 to 100%). If only one of the two parameters should be set, select «-1» for the value of the second parameters. Presets are displayed at any time. Their values can be used when configuring lock functions and scenes.

1.5.8 Module Electronic JAS-04/08 > Channel 1: General settings

Device model	Channel activity	<input type="radio"/> Inactive <input checked="" type="radio"/> Active
Presets	Outputs order	<input checked="" type="radio"/> Up/Down <input type="radio"/> Down/Up
<b>Channel 1: General settings</b>		
Channel 1: Scenes	Mode	<input checked="" type="radio"/> Blinds <input type="radio"/> Jalousie
Channel 2: General settings	Full movement, down (seconds)	10
Channel 3: General settings	Full movement, up (seconds)	10
Channel 4: General settings	Step duration (*0,1 seconds)	1
	Pause before reverse (*0,1 seconds)	0
	Send current position after stop	<input checked="" type="radio"/> Don't send <input type="radio"/> Send
	Send current position every (minutes, 0 = don't send periodically)	0
	Channel locking	<input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
	Locking object	<input checked="" type="radio"/> Normal <input type="radio"/> Inverted
	When locking	Stay unchanged
	When unlocking	Stay unchanged
	Scenes	<input type="radio"/> Disabled <input checked="" type="radio"/> Enabled
Group Objects		Parameters

Figure 3. Tab «Channel 1: general settings», blinds control mode («Blinds»)

## 3.2 CHANNEL ACTIVITY

The parameter turns the channel off («Inactive») or on («Active»). In the «Active» position, the remaining channel settings are displayed.

## 3.3 OUTPUTS ORDER

The parameter sets the order of connecting the blinds drive control circuits to the device outputs: first up, then down («Up/Down») or first down, then up («Down/Up»).

## 3.4 MODE

The parameter allows to select a controlled object: without lamellae («Blinds») or with lamellae («Jalousie»). When the «Jalousie» mode is selected, communication objects for controlling the inclination angle of the lamellae and their current position are activated.

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### **3.5 FULL MOVEMENT, DOWN**

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The parameter sets the time for the blinds to fully lower from the highest position to the lowest one. Time is set in seconds, the range of acceptable values is 5..255.

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### **3.6 FULL MOVEMENT, UP**

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The parameter sets the time for the blinds to fully rise from lowest to highest position. Time is set in seconds, the range of acceptable values is 5..255.

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### **3.7 PAUSE BEFOR REVERSE**

---

The parameter sets the pause when changing the direction of the blinds movement. If the blinds were moving up and you want to reverse the direction, the device will first de-energize the «up» relay, wait for the time specified in the parameter, and then turn on the «down» relay (and vice versa). The value is set in 1/10 fractions of a second, the range of acceptable values is 0..100.

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### **3.8 STEP DURATION**

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The parameter sets the duration of the «Step» command: when a «Step» telegram is received from a communication object of the 1.007 «Step» type, the corresponding output of the device is activated for the specified time. The value is set in 1/10 fractions of a second, the range of acceptable values is 0..100.

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### **3.9 SEND CURRENT POSITION EVERY**

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When setting the value of this parameter from 1 to 60, the device will periodically (once in the specified number of minutes) send the current position of the blinds. If the parameter value is zero, periodic sending of the current position is disabled.

---

### **3.10 SEND CURRENT POSITION AFTER STOP**

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The parameter allows to configure sending of the current position of the blinds upon the end of their movement («Send»). If «Don't send» is selected, sending upon the end of the movement will not be performed.

1.5.8 Module Electronic JAS-04/08 > Channel 1: General settings

Device model	Channel activity	<input type="radio"/> Inactive <input checked="" type="radio"/> Active
Presets	Outputs order	<input checked="" type="radio"/> Up/Down <input type="radio"/> Down/Up
<b>Channel 1: General settings</b>		
Channel 1: Scenes	Mode	<input type="radio"/> Blinds <input checked="" type="radio"/> Jalousie
Channel 2: General settings	Full movement, down (seconds)	10
Channel 3: General settings	Full movement, up (seconds)	10
Channel 4: General settings	Lamellae step (*0,1 seconds)	1
	Full lamellae turn (*0,1 seconds)	1
	Automatically turn lamellae after stop	<input checked="" type="radio"/> Disabled <input type="radio"/> Enabled
	Pause before reverse (*0,1 seconds)	0
	Send current position after stop	<input checked="" type="radio"/> Don't send <input type="radio"/> Send
	Send current position every (minutes, 0 = don't send periodically)	0

Figure 4. Tab «Channel 1: general settings», «Jalousie» control mode

### 3.11 LAMELLAE STEP

The parameter sets the duration of the «step» command: when a «Step» telegram is received from a communication object of the 1.007 «Step» type, the corresponding output of the device is activated for the specified time. Typically, the communication object "Step" is used to change the inclination angle of the lamellae. The value is set in 1/10 fractions of a second, the range of acceptable values is 0..100.

### 3.12 FULL LAMELLAE TURN

The parameter sets the time of complete rotation of the lamellae from one extreme position to another. The value is set in 1/10 fractions of a second, the range of acceptable values is 0..100.

### 3.13 AUTOMATICALLY TURN LAMELLAE AFTER STOP

If «Enabled» is selected, at the end of the telegram processing for the communication object «Height» (the jalousie have moved to the position indicated in the telegram), the lamellae will automatically rotate to the position previously indicated in the telegram for the communication object «Lamellae». When «Disabled» is selected, the lamellae do not automatically rotate at the end of movement.

## 3.14 CHANNEL LOCKING

The parameter allows to activate the channel locking mechanism. If it is set to «Enabled», the response parameters to the lock become available, and the «Channel locking» communication object of type 1.001 «Switch» appears.

## 3.15 LOCKING OBJECT

The parameter allows to use locking objects with both direct logic («Normal»: locked when «On», unlocked when «Off») and inverted («Inverted»: locked when «Off», unlocked when «On»). The parameter is available when parameter 3.14 «Channel locking» is set to «Enabled».

## 3.16 WHEN LOCKING

The parameter sets the response of the device after the receipt of the «Lock» telegram of 1.001 «Switch» type: the blinds move to the indicated position, and further control of the channel is blocked until the lock is released.

Stay unchanged	No action
0%	Upper limit position
100%	Lower limit position
Preset 1	-
Preset 2	-
Preset 3	-
Preset 4	-

**Table 1.** Possible reactions to locking

### 3.17 WHEN UNLOCKING

The parameter sets the response of the device after the receipt of the «Unlock» telegram of 1.001 «Switch» type: the blinds move to the indicated position, and further control of the channel is unlocked.

Stay unchanged	No action
0%	Upper limit position
100%	Lower limit position
Preset 1	-
Preset 2	-
Preset 3	-
Preset 4	-
Previous state	Position before locking

**Table 2.** Possible reactions to unlocking

### 3.18 SCENES

The parameter allows to activate the scene engine. If it is set to «Enabled», the «Channel 1: scenes» tab becomes available, and the «Scene» communication object of 18.001 «Scene control» type appears.

1.5.8 Module Electronic JAS-04/08 > Channel 1: Scenes

Device model	Scene number "A" to react (0 = no reaction)	1
Presets	Scene "A" reaction	0 %
Channel 1: General settings	Scene number "B" to react (0 = no reaction)	2
Channel 1: Scenes	Scene "B" reaction	100 %
Channel 2: General settings	Scene number "C" to react (0 = no reaction)	3
Channel 3: General settings	Scene "C" reaction	Preset 1
Channel 4: General settings	Scene number "D" to react (0 = no reaction)	4
	Scene "D" reaction	Preset 4
Group Objects	Parameters	

**Figure 5.** Tab «Channel 1: scenes»

### 3.19 SCENE NUMBER «A»..«D» TO REACT

The parameters allow to select the scene numbers a reaction to which is required. Up to four scenes can be configured. The scene number is indicated in the range 1 ..64. If the parameter is zero, no reaction is required.

### 3.20 SCENE «A»..«D» REACTION

The parameters allow to select the type of the device reaction to the scene.

0%	Upper limit position
100%	Lower limit position
Preset 1	-
Preset 2	-
Preset 3	-
Preset 4	-

**Table 3.** Possible reactions to the scene

## 4 COMMUNICATION OBJECTS

Depending on the settings, the device activates and supports up to 8 independent CommObjects per channel.

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
1	Channel 1	Up/Down			1 bit	C	-	W	-	U	up/down	Low
9	Channel 1	Step/Stop			1 bit	C	-	W	-	U	step	Low
17	Channel 1	Height			1 byte	C	R	W	T	U	percentage (0..100%)	Low
25	Channel 1	Lamellae			1 byte	C	R	W	T	U	percentage (0..100%)	Low
33	Channel 1	Current height			1 byte	C	R	-	T	-	percentage (0..100%)	Low
41	Channel 1	Current lamellae			1 byte	C	R	-	T	-	percentage (0..100%)	Low
49	Channel 1	Channel locking			1 bit	C	-	W	-	U	switch	Low
57	Channel 1	Scene			1 byte	C	-	W	-	U	scene control	Low

Group Objects

Parameters

**Figure 6.** Communication objects of channel 1

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## 4.1 UP/DOWN

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Available, if parameter 3.2 «Channel activity» is set to «Active». Allows to start the movement of blinds up or down.

The type of communication object is 1.008 «Up/Down».

The object is write-only.

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## 4.2 STEP/STOP

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Available, if parameter 3.2 «Channel activity» is set to «Active». Allows to stop the movement of blinds and control the blinds by means of short pulses («steps»). The «steps» control can be used, in particular, to change the position of the lamellae, if the controlled object is jalousie (depending on the type of drive).

The type of communication object is 1.007 «Step».

The object is write-only.

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## 4.3 HEIGHT

---

Available, if parameter 3.2 «Channel activity» is set to «Active». Allows to send a command to move the blinds to the specified position.

The type of communication object is 5.001 «Percentage (0..100%)».

The object is writable and readable.

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## 4.4 LAMELLAE

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Available, if parameter 3.2 «Channel activity» is set to «Active», and parameter 3.4 «Mode» is set to «Jalousie». Allows to send a command to move jalousie lamellae to the specified position.

The type of communication object is 5.001 «Percentage (0..100%)».

The object is writable and readable.

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## 4.5 CURRENT HEIGHT

---

Available, if parameter 3.2 «Channel activity» is set to «Active». Allows to read the current position of blinds using telegrams of 5.001 «Percentage (0..100%)» type. The object is read-only. Using parameters 3.9 «Send current position after stop» and 3.10 «Send current position after stop», automatic sending of the current position can be arranged.

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## 4.6 CURRENT LAMELLAE

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Available, if parameter 3.2 «Channel activity» is set to «Active», and parameter 3.4 «Mode» is set to «Jalousie». Allows to read the current position of jalousie lamellae using telegrams of 5.001 «Percentage (0..100%)» type. The object is read-only. Using parameters 3.9 «Send current position after stop» and 3.10 «Send current position after stop», automatic sending of the current position can be arranged.

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## 4.7 CHANNEL LOCKING

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Available, if parameter 3.2 «Channel activity» is set to «Active», and parameter 3.14 «Channel locking» is set to «Enabled». Allows to lock/unlock the channel.

The type of communication object is 1.001 «Switch».

The object is write-only.

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## 4.8 SCENE

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Available, if parameter 3.2 «Channel activity» is set to «Active» and parameter 3.18 «Scenes» is set to «Enabled». Allows the device to respond to scenes. The type of communication object is 18.001 «Scene control». The object is write-only. The response to scenes can be adjusted using the «Channel 1: scenes» parameter tab, as described in pp. 3.18... 3.20.

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## **5 DESCRIPTION OF BEHAVIOR OF THE DEVICE AFTER PROGRAMMING**

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After the initial loading of the software application the device is in the following state:

- relay contact groups of all channels: «disabled» position;
- all channels are inactive (parameters 3.2 «Channel activity» of all channels: in the «Inactive» position);
- all settings: default values.

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## **6 DESCRIPTION OF BEHAVIOR OF THE DEVICE AFTER LOSS AND RETURN OF BUS VOLTAGE**

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In case of loss of communication with the KNX bus (when the bus voltage drops below an allowable level), the device switches all the relays of all channels to the «off» position.

After communication with the KNX bus is restored (when the bus voltage returns to the allowable range), all relays of all channels are in the «off» state.