

**eNet radio blinds actuator 1-gang, for rail mounting**

Art. No. : FMJ50700REG

**Operating instructions****1 Safety instructions**

Electrical devices may only be mounted and connected by electrically skilled persons.

**Serious injuries, fire or property damage possible. Please read and follow manual fully.**

**Danger of electric shock. Always disconnect before carrying out work on the device or load. In so doing, take all the circuit breakers into account, which support dangerous voltages to the device and or load.**

**Danger of electric shock. During installation and cable routing, comply with the regulations and standards which apply for SELV circuits.**

**For parallel connection of several motors to an output it is essential to observe the corresponding instructions of the manufacturers, and to use a cut-off relay if necessary. The motors may be destroyed.**

**Risk of injury. Use the device only for controlling Venetian blind and roller shutter motors or awnings. Do not use it to switch other loads.**

**Use only venetian blind motors with mechanical or electronic limit switches. Check the limit switches for correct adjustment. Observe the specifications of the motor manufacturers. Device can be damaged.**

**Fire hazard! Operation exclusively with the power supplies listed under accessories**

**These instructions are an integral part of the product, and must remain with the end customer.**

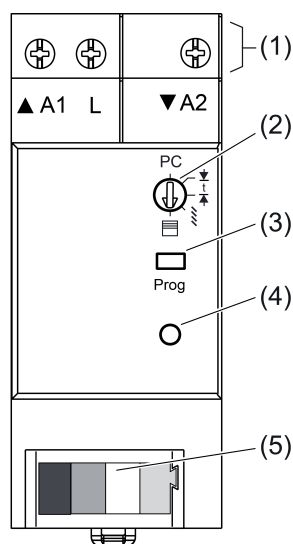
**2 Device components**

Figure 1: Device components

- (1) Terminals
- (2) Operating mode switch
- (3) Button **Prog**
- (4) Status LED
- (5) Bus line connection

### 3 Function

#### Intended use

- Controlling electrically driven Venetian blinds, rolling shutters and awnings
- Operation with suitable eNet radio transmitters
- Operation with power supply RMD and receiver module RMD cover or eNet server (see accessories)
- Installation in distribution boxes on DIN rail according to EN 60715

#### Product characteristics

- Operating mode switch for switch-over to blind actuator, shutter actuator or parameterisation via eNet server
- Positioning of the Venetian blind and slats via scene recall
- Position for sun protection and twilight can be saved
- Status feedback to radio transmitter
- Switchable output with **Prog** button
- Blind/shutter running time can be saved
- Slat change-over time can be saved
- Fabric-stretching for awnings
- Status indicator via LED

Can be set with eNet server:

- Change-over-time for direction change
- Running direction invertible
- Operation locks
- Position for sun protection, twilight, lock-out protection and wind alarm

Supplementary functions with eNet Server:


- Fully encrypted radio transmission (AES-CCM) from eNet Server software version 2.0
- Update of the device software
- Reading of error memory

#### Behaviour in case of bus voltage failure and return

If the bus voltage fails, the actuator switches off. The response to bus voltage return can be parameterised with eNet server.

Default setting: no action.

### 4 Operation

-  When operating with the eNet Server, operation and signalling could vary from what is described here.

#### Operation with radio transmitters

Operation is with radio transmitters, please observe the radio transmitter instructions.

#### Operation with Prog button

- Press **Prog** button briefly.  
A moving blind/shutter is stopped and a stationary blind/shutter is briefly activated, e.g. for slat change-over.  
The control direction is changed when the button is pressed again.
- Press the **Prog** button for longer than one second but shorter than four seconds.  
The motor moves to the end position.  
The control direction is changed when the button is pressed again.  
Status LED lights up: output switched on  
Status LED off: output switched off

## 5 Information for electrically skilled persons

### 5.1 Fitting and electrical connection



#### **DANGER!**

**Electrical shock when live parts are touched.**

**Electrical shocks can be fatal.**

**Before working on the device, disconnect the power supply and cover up live parts in the working environment.**

#### **Fitting the device**

- Mount device on DIN rail. Output terminals must be at the top.

#### **Connect bus line**

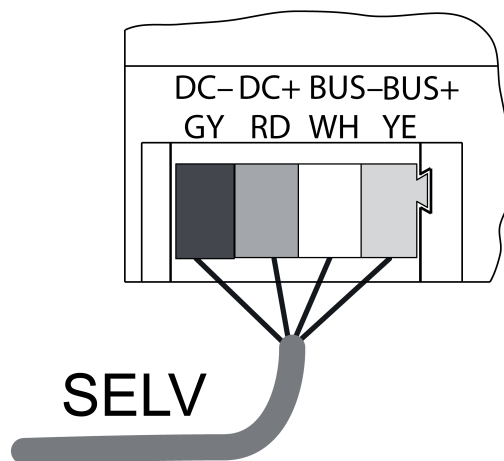


Figure 2: Connection diagram of bus line

Labelling / Colour	Connection
<b>DC-</b> / <b>GY</b> dark grey	Power supply –
<b>DC+</b> / <b>RD</b> red	Power supply +
<b>Bus-</b> / <b>WH</b> white	Data cable –
<b>Bus+</b> / <b>YE</b> yellow	Data cable +

As bus line, use e.g. J-Y(St)Y 2x2x0.8

- Connect the device with bus line (figure 2) to the RMD reception module and power supply (see instructions of RMD reception module and power supply).

**Connecting loads**

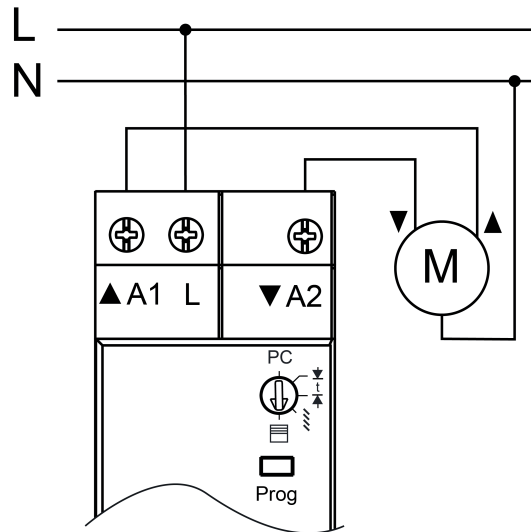


Figure 3: Connection example

- Connect load as shown in the connection example (figure 3).

**Presetting the operating mode**

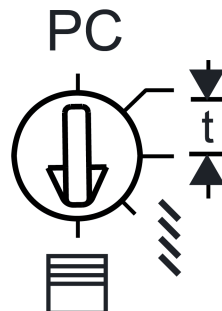


Figure 4: Operating mode switch

Switch position	Function
<b>PC</b>	Operating mode and parameter set with eNet server.*)
▼ t	Commissioning - determine running time
▲ t	Commissioning - determine slat time
≡	Blind operating mode
☰	Operating mode rolling shutter, awning

\*) If the operating mode switch is turned from the position **PC** to another operating mode, the parameters are set to the default setting. The settings made with the eNet Server will be lost.

Mains voltage is switched off.

- Set the operating mode switch.

## 5.2 Commissioning



### **DANGER!**

**Electrical shock when live parts are touched.**

**Electrical shocks can be fatal.**

**During commissioning, cover the parts carrying voltage on radio transmitters and actuators and in their surrounding area.**

- i** The actuator can also be commissioned with eNet Server as an alternative to the commissioning described here.
- i** Prerequisite for scenes and positioning movements is that the moving times of the connected blind/shutter in the actuator are saved.

### **Saving blind/shutter running time for rolling shutters**

The operating mode switch (figure 4) is in the Venetian blind ☸ or rolling shutter ☐ position.

- Turn the operating mode switch (2) to the ▲ t position until the blind/shutter reaches the upper end position.
- Turn operating mode switch to the ▼ t position.  
The blind/shutter moves downwards.
- When the lower end position is reached, turn the operating mode switch to the ☐ position.  
The running time is saved and the blind/shutter moves to the upper end position.

### **Saving blind/shutter running time for blind**

The operating mode switch (figure 4) is in the Venetian blind ☸ or rolling shutter ☐ position.

- Turn the operating mode switch (2) to the ▲ t position until the blind/shutter reaches the upper end position.
- Turn operating mode switch to the ▼ t position.  
The blind/shutter moves downwards.
- When the lower end position is reached, turn the operating mode switch to the ▲ t position.
- When the slats have been fully changed over, turn the operating mode switch to the ☸ position.  
The running times are saved and the blind/shutter moves to the upper end position.

### **Saving the awning running time**

The operating mode switch (figure 4) is in the Venetian blind ☸ or rolling shutter ☐ position.

- Turn the operating mode switch (2) to the ▲ t position until the blind/shutter reaches the upper end position.
- Turn operating mode switch to the ▼ t position.
- For awnings without fabric-stretching function: When the extended lower end position is reached, turn the operating mode switch to the ▲ t position. As soon the fabric is hanging taut, turn the operating mode switch to the ☐ position.
- For awnings with their own fabric-stretching function: When the extended lower end position is reached, turn the operating mode switch to the ☐ position.  
The running times are saved and the blind/shutter moves to the upper end position.

### **Connecting actuator to radio transmitters**

Load is switched off.

- Press the **Prog** button for longer than 4 seconds.  
The blind/shutter starts.  
The status LED flashes after 4 seconds and the blind/shutter stops. The actuator is in programming mode for approx. 1 minute.
- Switch radio transmitter to programming mode (see radio transmitter instructions).
- Trigger telegram on the radio transmitter.

The status LED lights up for 5 seconds.

The actuator is connected to the radio transmitter. The actuator and radio transmitter exit the programming mode automatically.

- i** If the status LED of the actuator flashes 3 times at 1-second intervals for approx. 5 seconds, then the programming operation was not successful. All the memory locations in the actuator or radio transmitter are occupied.
- i** Scene buttons must be connected separately.

### Disconnecting connection to a radio transmitter

- Carry out the same steps as when connecting (see Connecting actuator to radio transmitters).

The status LED of the actuator flashes quickly for 5 seconds.

The actuator is disconnected from the radio transmitter. The actuator and radio transmitter exit the programming mode automatically.

- i** If there several connections or scene buttons for a radio transmitter, all connections must be disconnected individually.

### Resetting the device to the factory setting

All connections to radio transmitters are disconnected and parameters are reset to default setting. If the operating mode switch is on **PC**, the rolling shutter operating mode is set.

- i** The connections in the radio transmitters are preserved and must be deleted separately.

Load is switched off.

- Press the **Prog** button for at least 20 seconds.  
The blind/shutter starts.  
The status LED flashes after 4 seconds and the blind/shutter stops. The status LED flashes faster after 20 seconds.
- Release **Prog** button and press briefly once again within 10 seconds.  
The status LED flashes more slowly for approx. 5 seconds.  
The device is reset to default setting.

## 6 Appendix

### 6.1 Technical data

Rated voltage	AC 230 V ~
Mains frequency	50 / 60 Hz
Ambient temperature	-5 ... +45 °C
Minimum actuation time in operating mode	
Venetian blind	0.1 s
Roller shutter	0.3 s
Minimum switching current AC	100 mA
Contact type	μ
Standby power	max. 0.2 W
Running time	1 ... 600 s
Running time default setting	120 sec
Slat adjusting time	0 ... 10 s
Connected load	
Motors	1000 W
Connection of load terminals	
single stranded	1.5 ... 4 mm <sup>2</sup>
Finely stranded without conductor sleeve	0.75 ... 4 mm <sup>2</sup>
Finely stranded with conductor sleeve	0.5 ... 2.5 mm <sup>2</sup>
Fitting width	36 mm / 2 modules
Bus line	
Rated voltage	DC 12 V SELV
Current consumption	max. 20 mA
Connection, Bus	device connection terminal

Cable length

max. 3 m

## 6.2 Parameter list

The device parameters can be changed with the eNet server:

### Device and channels

Parameters	Setting options, Basic setting	Explanations
Function	Venetian blind, unused, basic position: Venetian blind	<p>Venetian blind The channel is integrated for the "Venetian blind" central function in the <b>eNet SMART HOME app</b>.</p> <p>Unused The channel is not displayed in the <b>eNet SMART HOME app</b> and is disabled for use in the commissioning interface.</p>
Operating mode	Roller shutter Venetian blind Awning Basic setting: Roller shutter	<p>Roller shutter A rolling shutter or an awning is controlled for which the Fabric stretching function is required.</p> <p>Venetian blind A Venetian blind is controlled.</p> <p>Awning An awning is controlled for which the Fabric stretching function is required.</p>

### Advanced device settings

Parameters	Setting options, Basic setting	Explanations
Manual commissioning	On, Off Basic setting: On	Disables manual commissioning for all device channels. In the "Off" setting, the device cannot be reset to the factory setting.

### Channel settings

Parameters	Setting options, Basic setting	Explanations
Operating hours up	0...65535 Basic setting: Current value	<p>The time is counted during which the load is physically switched on (relay contact closed). This parameter can be reset to "0", for example after exchanging the load. The Reset button is used to reset the meter to "0". The device must be programmed to apply the change.</p>

Operating hours down	0...65535 Basic setting: Current value	The time is counted during which the load is physically switched on (relay contact closed). This parameter can be reset to "0", for example after exchanging the load. The Reset button is used to reset the meter to "0". The device must be programmed to apply the change.
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**Extended channel settings**

Parameters	Setting options, Basic setting	Explanations
Operating mode	Roller shutter Venetian blind Awning Basic setting: Roller shutter	See Device and channels.
Manual commissioning	On, Off Basic setting: On	Blocks manual commissioning for the device channel. In the "Off" setting, the device cannot be reset to the factory setting.
Local Operation	On, Off Basic setting: On	Blocks the output for operation using the button.
Running time	1 ... 600 sec Basic setting: 120 s	Absolute time which the blind/shutter requires from the top to the bottom end position. The entry is essential if scene or position movements are to occur.
Slat change-over time Fabric-stretching time	0 ms ... 10 sec 300 ms ... 10 s Basic setting: 0 ms / 300 ms	Absolute time for changing-over Venetian blind slats. The fabric stretching time can also be set here for the Awning operating mode.
Minimum change-over-time	300 ms ... 10 sec Basic setting: 1 s	Minimum interruption time when changing directions. Increasing the minimum change-over time will cause less wear on the motors.
Invert movement direction	On, Off Basic setting: Off	Inverts the activation of the relay outputs. During inverted operation, the relay outputs "Up" and "Down" should be activated in reverse. This is required, for example, for controlling skylights.
Behaviour on voltage return	No change Configured value Basic setting: No change	Defines the behaviour of the output after voltage return. RMD design: Bus voltage return



Configured venetian blind position	0 ... 100 % Basic setting: 0 %	If the value "Configured position" is entered for the parameter "Behaviour after voltage return", then the blind/shutter position set here is approached.
Configured slat position	0 ... 100 % Basic setting: 0 %	If the value "Configured position" is entered for the parameter "Behaviour after voltage return", then the slat position set here is approached.
Behaviour after the end of the disabling function	no change Last value Down up Basic setting: No change	Behaviour of the output when a block is removed.
Manual saving of the scene values	On, Off Basic setting: On	Disables the saving of the current Venetian blind position as scene value in an actuator for a command via a transmitter.
Priority, lock-out protection	0...4 Basic setting: 1	Specifies the priority for recalling and removing a scene of type Lock-out protection for the channel.
Activate lock-out protection blind position	0 ... 100 % Basic setting: 0 %	Defines the behaviour of the output on activating the lock-out protection.
Activate lock-out protection slat position	0 ... 100 % Basic setting: 0 %	Defines the slat position of the output on activating the lock-out protection. Only visible when the Venetian blind operating mode is set.
Deactivate lock-out protection blind position	0 ... 100 % Basic setting: 0 %	Defines the behaviour of the output on deactivating the lock-out protection. Only visible when the priority for the lock-out protection is 0.
Deacitvate lock-out protection slat position	0 ... 100 % Basic setting: 0 %	Defines the behaviour of the output on deactivating the lock-out protection. Only visible when the priority for lock-out protection is 0 and the Venetian blind operating mode is set.
Priority, restraint	0...4 Basic setting: 2	Specifies the priority for recalling and removing a scene of type Restraint for the channel.
Activate force operation blind position	0 ... 100 % Basic setting: 0 %	Defines the behaviour of the output on activating the forced operation.

Recall forced operation slat position	0 ... 100 % Basic setting: 0 %	Defines the slat position of the output on activating forced operation. Only visible when the Venetian blind operating mode is set.
Deactivate force operation blind position	0 ... 100 % Basic setting: 0 %	Defines the behaviour of the output on deactivating the forced operation. Only visible when the priority for the forced operation is 0.
Deacitvate forced operation slat position	0 ... 100 % Basic setting: 0 %	Defines the slat position of the output on deactivating forced operation. Only visible when the priority for the forced operation is 0 and the Venetian blind operating mode is set.
Priority, wind alarm	0...4 Basic setting: 3	Specifies the priority for recalling and removing a scene of type Wind alarm for the channel.
Activate wind alarm blind position	0 ... 100 % Basic setting: 0 %	Defines the behaviour of the output on activating the wind alarm.
Recall wind alarm slat position	0 ... 100 % Basic setting: 0 %	Defines the slat position of the output on activating the wind alarm. Only visible when the Venetian blind operating mode is set.
Deactivate wind alarm blind position	0 ... 100 % Basic setting: 0 %	Defines the behaviour of the output on deactivating the wind alarm. Only visible when the priority for the wind alarm is 0.
Deacitvate wind alarm slat position	0 ... 100 % Basic setting: 0 %	Defines the slat position of the output on deactivating the wind alarm. Only visible when the priority for the wind alarm is 0 and the Venetian blind operating mode is set.
Priority, sun protection	0...4 Basic setting: 0	Specifies the priority for recalling and removing a scene of type Sun protection for the channel.
Activate sun protection blind position	0 ... 100 % Basic setting: 100 %	Defines the behaviour of the output on activating the sun protection.
Recall sun protection slat position	0 ... 100 % Basic setting: 100 %	Defines the slat position of the output on activating the sun protection. Only visible when the Venetian blind operating mode is set.

Deactivate sun protection blind position	0 ... 100 % Basic setting: 0 %	Defines the behaviour of the output on deactivating the sun protection. Only visible when the priority for the sun protection is 0.
Deactivate sun protection slat position	0 ... 100 % Basic setting: 0 %	Defines the slat position of the output on deactivating the sun protection. Only visible when the priority for the sun protection is 0 and the Venetian blind operating mode is set.
Priority, twilight	0...4 Basic setting: 0	Specifies the priority for recalling and removing a scene of type Twilight for the channel.
Activate twilight blind position	0 ... 100 % Basic setting: 100 %	Defines the behaviour of the output on activating the twilight function.
Activate twilight slat position	0 ... 100 % Basic setting: 100 %	Defines the slat position of the output on activating the twilight function. Only visible when the Venetian blind operating mode is set.
Deactivate twilight blind position	0 ... 100 % Basic setting: 0 %	Defines the behaviour of the output on deactivating the twilight function. Only visible when the priority for the twilight function is 0.
Deactivate twilight slat position	0 ... 100 % Basic setting: 0 %	Defines the slat position of the output on deactivating the twilight function. Only visible when the priority for the twilight function is 0 and the Venetian blind operating mode is set.

### Information window

During channel selection in the Information window, the following settings can be made or values displayed.

Display value	Explanations
Position value, venetian blind	The position value of the Venetian blind can be changed.
Position value, slat	The position value of the slat can be changed.
Restraint	Display of forced position status.
Lock-out protection	Display of the lock-out protection status
Operating hours UP	Display of the operating hours in the UP direction since the last restart in the Settings window.
Operating hours DOWN	Display of the operating hours in the DOWN direction since the last restart in the Settings window.

### **6.3 Accessories**

Power supply 12 V, for rail mounting  
eNet master receiver for rail mounting  
eNet server for rail mounting

Art. No. NT1220REGVDC  
Art. No. FMFK32REG  
Art. No. ENET-SERVER

### **6.4 Warranty**

The warranty follows about the specialty store in between the legal framework as provided for by law.

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