Omnio AG, CH-8426 Lufingen

Ratio® Radio Bus Systems

Description	Data	Type	Order No.
REG blinds actuator, 4-fold with integrated antenna	4x230VAC / 6A	REGJ24/01	4301
REG blinds actuator, 4-fold with external antenna	4x230VAC / 6A	REGJ24/02	4302
External antenna kit EAK101 Length of the antenna cable 3m		EAK101	4901

General

The Ratio® switch actuators/receivers are activated by radio signals of the Ratio® radio senders. Each sender can actuate an indefinite number of actuators/receivers. The Ratio® radio senders have a fixed address and are programmed into Ratio® receivers (actuators). The Ratio® switch actuators activate various end users such as light bulbs, blinds, gates, doors, control valves and others.

Product and function description

The Ratio® blinds actuator REGJ24/01 is a device for distributor mounting. By means of Ratio® radio transmitters (Piezo- and Solar radio transmitters), four different and independent electric users can be switched. Up to 30 different senders (wall-mounted sender, windows contact, temperature sensor, motion detector, industrial transmitter) can be programmed.

According to parameterization, the outlet is assigned different functions such as e.g. key sequences or switch-off delays, which means that the Ratio® blinds actuator REGJ24/02 consists of the device itself (hardware) and the application program (software). By means of a separate software program, the various optional function are parameterized.

The blinds actuator REGSJ24/01 is equipped with an integrated antenna, the blinds actuator REGS24/02 with an external antenna. The blinds actuator REGS24/02 is therefore suitable for mounting in metal cabinets. A blinds actuator REGJ24/01 can be converted into a REGJ24/02 with the antenna kit EAK101.

Technical Data

Receiving frequency 868,3MHz

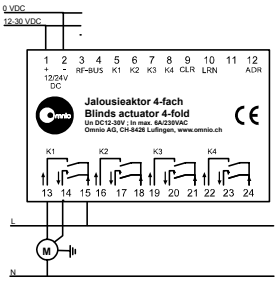
Power supply by
- D.C. voltage 12-30VDC
- Max. power input 90mA
- Idle power input: approx. 20mA
- Idle performance: approx. 4VA
- Idle performance: approx. 1.1W

Short-circuit security
By means of external mains protective switch

Overload security
By means of external mains protective switch

Antenna
For REGS24/01: antenna integrated
For REGS24/02: external antenna

Example of connection



Load outlet
- Number: 4 change-over contact potential-free for
- Nominal voltage: 230V, 50Hz
- Nominal current: 13A, AC1 ohmic load
- Connection power at 35° C environmental temperature:
  - light bulbs: max. 1850W
  - halogen lamp: max. 1400W
  - iron core transformer: max 120VA
  - fluorescent light: -
  - Capacity load: -
  - Engine load: max. 2A

Switching behavior
Capable of parameterization, also refer to parameterization / application program.

Operating elements
- 1 programming key LRN
- 1 deleting key CLR

Indicators
4 LED K1-K4 green for signalization, LRN per channel

Connections
- Load current circuit, mechanical: Length of skinning 9..10mm
  The following wire cross sections are admissible:
  - 0,5...1,5mm2 unifilar
  - 0,5...1,5mm2 finely stranded conductor with ferrule

- Electric load current circuit:
  - Finely stranded conductor from 1mm2,
    Ampacity of max. 6A
  - All other conductors from 1,5mm2:
    Ampacity of max. 10A

Mechanical data
- Casing: casing for serial mounting DIN 43880
- Material: Noryl UL 94-V0
- Measurements: WxDxH 70mm x 90mm x 55mm (4TE)
- Weight: approx. 80 g
- Mounting: Latch, bearing rail TS35 according to EN50022

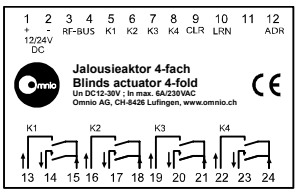
Electric security
- Protection (according to EN 60529): IP20
- Conforms to EN 090-2-2 and EN 60669-2-1

Surrounding conditions
- Environmental temperature when in operation: -20°...+ 45° C
- Storing temperature: -25...+ 70° C
- Relative humidity (not condensing): 5.93%

Approbations
CE / TUV,
Conforms to the R&TTE guidelines 1999/5/EC and to EU regulations.

CE labeling
According to EMV guidelines (residential and industrial building),
Low voltage guidelines

Lage und Funktion der Anzeige- und Bedienelemente



Clampe	Connection	Clamp	Connection
1	Supply voltage + 12-30 VDC	13	Closing contact channel 1 command up
2	Supply voltage – 0VDC	14	Closing contact channel 1 command down
3	-	15	Joint channel 1
4	-	16	Closing contact channel 2 command up
5	LED of channel 1	17	Closing contact channel 2 command down
6	LED of channel 2	18	Joint channel 2
7	LED of channel 3	19	Closing contact channel 3 command up
8	LED of channel 4	20	Closing contact channel 3 command down
9	CLR key, delete	21	Joint channel 3
10	LRN key, programming	22	Closing contact channel 4 command up
11	-	23	Closing contact channel 4 command down
12	Address coding switch ADR	24	Joint channel 4

Note in installation
The device can be used for fixed fitting indoors, in dry rooms and in distributors and sockets.

Warning
- The device can be fitted into distributors (230VAC). It may only be fitted and taken into operation by a professional electrician.
- It is important to note that the device can be activated by a line protection switch.
- For isolation examinations, connect the connecting lines (external and neutral conductor)
- For line isolation examinations that measure conductor against conductor contrary to today's valid norm DIN VDE 0100 T.610, the device must be disconnected, otherwise it might be destroyed.
- For planning and installation of electric devices, you must observe the relevant guidelines, regulations and instructions of the corresponding country.
- The applicable security and accident prevention regulations must be observed.
- The device must not be opened. A defective device must be returned to the retail agent or the corresponding office of Omnio AG.

Mounting and wiring
General:
The Ratio® switch actuator may be fitted into distributors, in synthetic boxes or into other devices. Mounting is done onto a TS35 standard track, the fitting position is arbitrary.

Placement and ranges depend on the materials used in a building. Do not fit the Ratio® switch receiver into metal cabinets or in the direct vicinity of large metal objects. Fitting of the Ratio® switch receivers close to or on the ground is not recommended. Please also read the leaflet «Range Planning» under www.omnio.ch.

Connect steering and load current circuits:
- The connections consists of screw clamps
- Isolate conductors approx. 9..10mm, fix in clamp and tighten the screws with a screw driver no. 1.

Cross section: *refer to Technical Data*

Range between sender and receiver
The signal strength of the radio signals decreases with increasing distance between sender and receiver. At intervisibility, the range is approx. 30m in corridors and 100m in halls. Inside buildings, the range of the signals depends on the building materials used:

Material	Typical range
Brickwork	20m, through max. 3 walls
Reinforced concrete	10m, through max. 1 wall / ceiling
Plasterboard / wood	30m, through max. 5 walls
Heat insulating windows	5m, through max. 1 window

The range of the radio signals is restricted by:
- Mounting of the sender / receiver in the close vicinity of metal containing materials or metal objects. A minimal distance of 10 cm must be kept.
- Mounting of the sender / receiver on the ground or close to the ground
- Humidity in materials
- Glass panes with a vapor deposited metal layer
- Devices that also send high-frequency signals, e.g. computers, audio and video devices or electronic series-mounted devices for illuminants. A minimal distance of 50cm must be kept.

Programming and Deleting senders
Switching on the programming mode:
Press the ***LRN*** key. After 2 second, the programming mode of channel 1 becomes active, indicated by the blinking ***CLR***-LED of channel 1 as soon as the user to be connected is confirmed. Shortly press the ***LRN*** key to switch to the next channel.

Turn off the programming mode:
Press the ***LRN*** key for more than two seconds, the programming mode is turned off. If no Ratio® radio sender key is pressed within 30 seconds, the programming mode terminates automatically.

Programming Ratio® radio senders:
By pressing a Ratio® radio sender key or the learning key of a Ratio® radio sensor (room sensor, window contact), the Ratio® receiver is assigned the corresponding key on the active channel. The sender assignation is confirmed when the blinking stops for 4 seconds. The blinking starts again and another 30 Ratio® radio senders/sensors may be programmed into the active channel.

By shortly pressing the ***LRN*** key, you switch to the next channel.

When programming, a sender must be within a 5m reach of the receiver. The receiver operates in a restricted range when being programmed.

Selective deletion of a sender:
Single programmed Ratio® radio senders/sensors can be deleted. Activate the programming mode of the Ratio® receiver (press ***LRN*** key for 2 seconds) and switch to the corresponding channel. Now press the programmed key of the corresponding Ratio® radio sender/sensor to delete it.

Delivery state:
Press the ***CLR*** key. After 2 seconds all the programmed Ratio® radio senders/sensors are deleted and the programming mode of channel 1 is automatically switched on.

Parameterization / Application program
The parameters of the application program can be programmed by a software program.

Legal regulations
The senders must not be used with other devices that are used directly or indirectly for live or health ensuring purposes for humans or by whose operation danger arises for humans, animals or assets. Do not leave the packing material carelessly; plastic foil/bags etc. are dangerous toys for children.
This manual is part of the device and our guarantee regulations. It must be handed to the user. Technical specifications of the device may change without prior notice.

Old devices
Do not dispose of old devices into your household litter bin. The device contains electric parts that must be disposed as electronic waste. The casing consists of recyclable synthetics.

General note

For questions please contact our technical support:
Phone +41 1 876 00 41
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