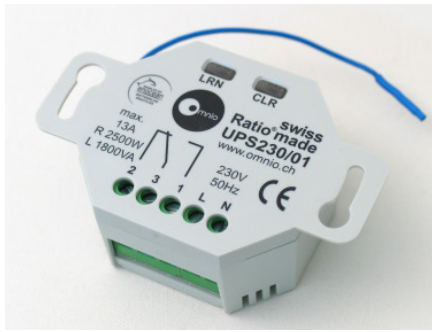


Operating Instructions

RATIO® Radio Bus System

UP Switch Actuator 1-channel 13A

UPS230/01



General Information:

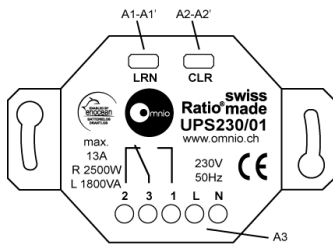
The Ratio® switch actuators/receivers are controlled via radio signals of the Ratio® radio transmitters. Every transmitter can control an unlimited number of actuators/receivers. The Ratio® radio transmitters have a fixed address and must be learned in for Ratio® actuators / receivers.

Product description:

The Ratio® UP switch actuator 1-channel UPS230/01 is a device for flush or surface mounting. A group of electric devices can be switched via its isolated output by means of Ratio® radio transmitters.

Depending on the parameter setting, different functions can be assigned to the output, for example, key sequences or switch-off delays of 10 minutes, i.e. the Ratio® UP actuator consists of the device itself (hardware) and the application program (software).

Position and function of the display and operating elements



- A1: Button to switch from normal to learning mode and learn in and unlearn transmitters
- A1': LED indicating a valid telegram in the learning mode
- A2: Button for unlearning all learned-in transmitters
- A2': LED indicating the learning mode
- A3: Screw-type terminals 4mm² for connection of the supply voltage and the load circuit

Technical data

Connection voltage: 230VAC	
Change-over contact isolated	
Rated current	16A /
250VAC	
Make current	20ms/30A,
5ms/120A	
Max. switching capacity AC1	4000VA
Max. switching capacity AC15	750VA
Light bulbs	2000W
Halogen lamps 230VAC	2000W
Fluorescent lamps compensated	750W
Fluorescent lamps uncompensated	1000W
Fluorescent lamps duo-switched	1000W
Electronic ballast assuming 30 uF	3 ea
Motor load 1Ph AC3/230VAC	0.5kW
Capacitive load	30uF

Installation instructions

The device may only be used for fixed installation indoors, in dry rooms and for installation in plastic sockets, taking into consideration the technical data.

Warning:

- The device may be installed in flush-mounted sockets (230VAC) and may only be installed and taken into operation by a licensed specialist electrician.
- Please make sure that the device can be enabled by means of a line safety switch.
- For insulation tests, the connection line (outer and neutral wire) have to be connected with each other.
- For wire insulations tests which, contrary to today's valid standard DIN VDE 0100 T.610, measure wire against wire, the device has to be disconnected; otherwise, it may be destroyed.
- When planning and setting up electrical systems, the pertinent directives, rules and regulations applicable in each country have to be observed.
- The applicable safety and accident prevention regulations have to be observed.
- The technical data of the device, in particular the data of the switch contact, have to be observed.
- Do not open the device. A defective device has to be returned to the trader or the Omnio AG agency in charge.

Assembly and Wiring

The Ratio® UP actuator can be used in plastic sockets, for flush or surface mounting or in devices.

The position and the ranges depend on the materials used in a building. Do not install the Ratio® UP actuator in a casing made of metal or in the immediate vicinity of large metal objects. Installation close to the floor or on the floor is not recommended. See the data sheet Range Planning under www.omnio.ch.

Connecting control and load circuits:

- The connections consists of screw-type terminals 4mm².
- Strip the wires approx. 9..10mm, insert them into the terminal and tighten the screws using a screwdriver size 1.
- Max. two wires with 1.5mm² cross-section may be connected.

Range between transmitter and receiver

The signal strength of the radio signals decreases with rising distance between transmitter and receiver. If there is any visual contact, the range is approx. 30m in corridors and 100m in halls. In buildings the range of the radio signal is dependent on the construction materials used:

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

Limitation of the range of the radio signals due to:

- Installation of the transmitters / receivers in the direct vicinity of materials with metal components or metal objects. A distance of at least 10cm should be observed.
- Installation of the receivers on the floor (floor outlet) or close to the floor
- Humidity in materials

Devices that also emit high-frequency signals, e.g. computers, audio and video systems or electronic ballast for illuminants. A minimum distance of 50cm should be observed.

Learning in and unlearning of radio transmitters

Learning mode:

Keep the **LRN** button pushed. After 1 second, the learning mode becomes active, indicated visually by the flashing **CLR**-LED and the connected devices. If you push the **LRN** button immediately or if no button of a Ratio® radio transmitter is pushed for 30 seconds, the learning mode will be quit automatically.

Learning in Ratio® radio transmitters in the learning mode:

If you push a button of a Ratio® radio transmitter or the Learn button of a Ratio® radio sensor (room sensor, window contact), the complete rocker or the transmitter number is assigned to the Ratio® UP actuator in the learning mode. It does not matter which side of the rocker is being pushed. The transmitter assignment is confirmed by the fact that the flashing stops for 4 seconds. Then the flashing starts again and you can learn in up to 30 Ratio® radio transmitters/sensors.

If the Ratio® UP actuator is in the learning mode, a transmitter must not be farther away than 5m from the Ratio® UP actuator, since in this mode the Ratio® UP actuator is working with a range limited to 5m.

Selective unlearning of transmitters:

Individually learned in Ratio® radio transmitters/sensors can be unlearned selectively. To this end, the Ratio® UP actuator has to be switched to the learning mode (push **LRN** button for 1 second). If an already learned in button of a Ratio® radio transmitter/sensor is now pushed, this button will be unlearned immediately. This is indicated by the fact the **CLR**-LED stops flashing for 4 seconds. Then the flashing starts again and you can learn in or unlearn further transmitters. If you push the **LRN** button immediately or if no button of a Ratio® radio transmitter is pushed for 30 seconds, the learning/clearing mode will be quit automatically.

Unlearning all learned in transmitters:

Keep the **CLR** button pushed. After approx. 3 seconds all learned in Ratio® radio transmitters / sensors will be cleared from the memory and after another 2 seconds the program automatically switches over to the learning mode.

Function setting

The function of the switch output of the Ratio® UP actuator can be set. To do this, **push the rocker of the learned in Ratio® radio transmitter four times (On / Off)**. Do not press the key longer than 0.5 seconds and keep in mind that the breaks in between must also not exceed 0.5 seconds. At the Ratio® UP actuators itself, **the LRN or CLR button need not be pushed any more**.

Selecting and deselecting parameters:

To select one of the parameters, you first have to switch to the parameterization mode (no. 8). Then you can select all parameters starting with no. 1. Every selection of a parameter is indicated by a relay pulse of 1s duration and every deselection by a relay pulse of 500ms duration. Send the key sequence (no. 8) again to quit the parameterization mode again.

Example: Selecting the switch-off delay 5 minutes:

1. Select the parameterization mode with the key sequence **1-0-0-0** for parameter no. 8. If the parameterization mode is active, a switching of the relay should not be possible any more.
2. Select parameter **no.13** with the key sequence **1-1-0-1**.
3. Quite the parameterization mode with key sequence **1-0-0-0**

Now the Ratio® UP actuator is enabled with the function switch-off delay 5 minutes.



On (1)

OFF (0)

Nr.	Tastabfolge eines Funksender				Default wert	Parameterbeschreibung
0	0	0	0	0	-	Reset to standard values
1	0	0	0	1	0	Key sequence / Pulse (release = OFF)
2	0	0	1	0	0	0 = Off button, 1 = On button
3	0	0	1	1	0	Single key operation (step switch)
4	0	1	0	0	0	Radio transmitter signals will be inverted
5	0	1	0	1	0	No significance
6	0	1	1	0	1	No significance
7	0	1	1	1	1	Solar sensor can enable output (SET)
8	1	0	0	0	-	Solar sensor can disable output (CLR)
9	1	0	0	1	1	Parameterization mode ON/OFF
10	1	0	1	0	0	Switch-off delay off, inactive
11	1	0	1	1	0	Switch-off delay 6 seconds
12	1	1	0	0	0	Switch-off delay 30 minutes
13	1	1	0	1	0	Switch-off delay 2.5 minutes
14	1	1	1	0	0	Switch-off delay 5 minutes
15	1	1	1	1	0	Switch-off delay 10 minutes

0 means the Off side of a rocker of the radio wall transmitter, 1 means the On side of a rocker of the radio wall transmitter.

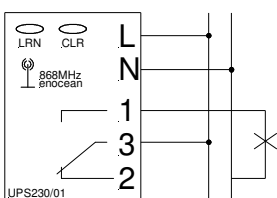
Legal requirements / old devices

The transmitters may not be used in connection with devices that are employed, directly or indirectly, for health- or life-saving purposes or if their operation may cause hazards to human beings, animals or property. Do not leave packaging material lying around carelessly. Plastic foils/bags, etc. may be hazardous toys for children.

These operating instructions are part of the device and part of our warranty terms. They have to be handed over to the customer. The technical specifications of the device may be changed without prior notice.

Do not throw old devices into the domestic garbage can. The device contains electrical components that have to be disposed off as electronic waste. The case is made of reusable plastic material.

Wiring diagram



Designation

Ratio® UP switch actuators 1-channel
13A/250VAC with one change-over contact
isolated, power supply 230VAC

Type

UPS230/01

Article number

3101000