



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

Description	Data	Type	Order No.
Flush mounted Repeater, Supply 230VAC		UPR230/01	9001
Flush mounted Repeater, Supply 24VDC		UPR24/01	9002

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 10cm must be kept.
- Mounting of the sender / receiver on the ground or close to the ground
- Humidity in materials
- 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.

Initiation

Connect the Ratio® repeater to power supply. There is no need to learn in devices. All received telegrams will be transmitted.

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 of as electronic waste. The casing consists of recyclable synthetics.

General note

For questions please contact our technical support:
 Phone +41 1 876 00 41
 Fax: +41 1 876 05 29
 Mail: support@omnio.ch
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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® switch actuators/receivers. 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® repeater UPR230/01 or UPR24/01 serves for the amplification of the radio telegram between Ratio® radio senders and Ratio® radio receivers. The Ratio® repeater is used in case of range difficulties between Ratio® radio senders and Ratio® radio receivers.

Technical data

Frequency 868,3MHz

Example of connection

Power supply by

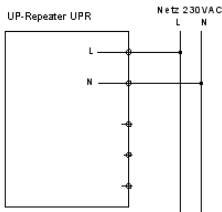
- Net feeding 230VAC for UPS230/xx or
- DC voltage supply 24VDC for UPS24/xx

230VAC mains supply

- Nominal voltage: AC230V, 50Hz
- Nominal current: 0,5A
- Open circuit current absorption: approx. 20mA
- Open circuit power absorption: approx. 4VA
- Open circuit power loss: approx. 1,1W

24VDC supply

- Nominal voltage: DC24V DC, +/- 10%
- Nominal current: 0,5A



Short-circuit security

By means of external mains protective switch

Overload security

By means of external mains protective switch

Load outlet

- None

Operating elements

- 1 programming key LRN
- 1 deleting key CLR

Indicators

- 1 LED for signalization LRN
- 1 LED for signalization CLR

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: synthetics lexan
- Measurements: WxD 51mm x 25mm
- Weight: approx. 80 g
- Mounting: Screw fixing in concealed box

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°...+ 40° C
- Storing temperature: -40...+ 85° C
- Relative humidity (not condensing): 5...90%

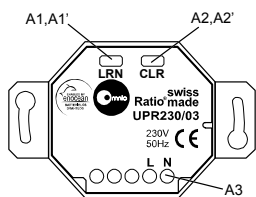
Approbations

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

Position and function of indicators and operating elements



- A1: Programming key for switching from normal mode to programming mode to program/delete radio senders
- A2: Delete key to delete all programmed radio senders
- A1': LED to indicate normal mode (LED off) or programming mode (LED on)
- A2': LED to indicate normal mode (LED off) or deleting mode (LED on)
- A3: Screw clamp to connect to load current circuits

Note in installation

The device can be installed fixedly indoors, in dry rooms and in flush-mounted boxes.

Warning

- The device can be fitted into flush-mounted boxes (230VAC). It may only be installed and taken into operation by a professional electrician.
- It is important 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 in synthetic boxes, concealed or surface mounted or in other devices.

Placement and ranges depend on the materials used in a building. Do not fit the Ratio® universal radio transmitter into metal cases or in the direct vicinity of large metal objects. Fitting the transmitter 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: