

Radio signal amplifier surface-mounted
Order-No. : 177 09

**Operation- and
Assembly Instructions**

1 Safety instructions

Electrical equipment may only be installed and fitted by electrically skilled persons.

Failure to observe the instructions may cause damage to the device and result in fire and other hazards.

The radio communication takes place via a non-exclusively available transmission path, and is therefore not suitable for safety-related applications, such as emergency stop and emergency call.

Do not shorten, extend or strip the antenna. Device can be damaged.

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

2 Device components

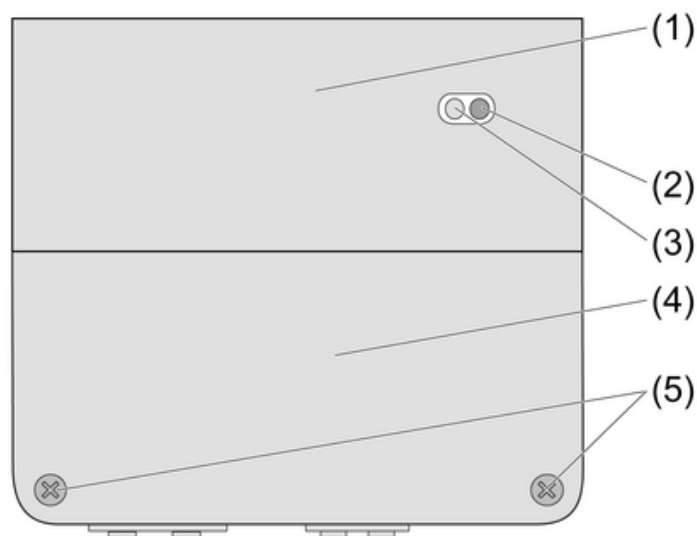


Figure 1

- (1) Repeater
- (2) LED, red
- (3) LED, green
- (4) Housing lid
- (5) Screws

3 Function

System information

By statute, the transmitting power, the reception characteristics and the antenna cannot be changed.

The device may be operated in all EU and EFTA countries.

The declaration of conformity can be viewed on our website.

The range of a radio system from the transmitter to the receiver depends on various circumstances.

The range of the system can be optimised by selecting the optimal installation location, taking into account the structural circumstances.

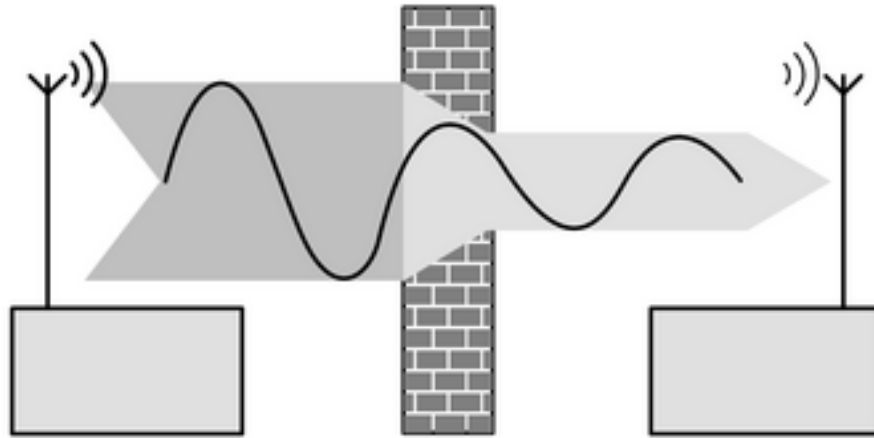


Figure 2: Reduced range due to structural obstacles

Example of penetration of various materials:

Material	Penetration
Wood, Plaster, Plasterboard	approx. 90%
Brick, Chipboard	approx. 70%
Reinforced concrete	approx. 30%
Metal, Metal grid	approx. 10%
Rain, Snow	approx. 1-40%

Intended use

- Device for receiving and repeating radio telegrams
- Extending the range of radio transmitters
- Surface-mounted

Product characteristics

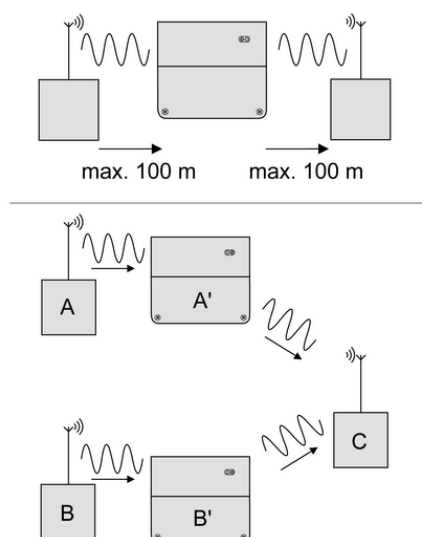


Figure 3

- Max. distance between transmitter and repeater and repeater and receiver 100 m
- Several repeaters can be installed in a single system, e.g. two transmitters **A + B** transmit to a single actuator **C** (Figure 3)
- Indication of the operating states via 2 LEDs:
 - Red LED lights up briefly: receiving a telegram
 - Green and red LEDs light up briefly: a taught telegram is being relayed
 - Red LED flashes continuously: repeater is in programming mode

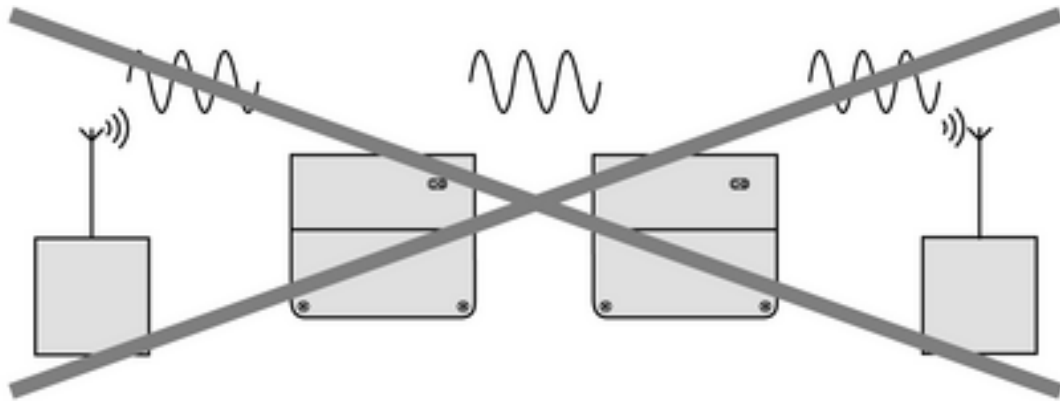


Figure 4

- i** Cascading of repeaters is not possible, i.e. telegrams transmitted by a repeater will not be repeated by another repeater (Figure 4).

4 Information for electrically skilled persons

4.1 Fitting and electrical connection

Mounting and connecting the device



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.

Protection rating IP 54 or IP 20, depending on the type of installation:

IP 54 = fixed connection with NYM-J 3x1.5 cable and antenna not routed out of the device.

IP 20 = connection with supplied mains cable and/or antenna routed out of the device.

Maintain a distance of at least 0.5 m from metal surfaces and electrical devices, e.g. microwave ovens, hi-fi and TV systems, electronic ballasts or transformers.

Mount repeater as close as possible to the middle of the desired transmission path.

- Slacken screws (5) and remove housing lid (4).

The **TOP** label on the rear of the housing has to be at the top.

If the repeater is intended to amplify the radio telegrams of a stationary transmitter, the teaching procedure for the radio transmitter should be performed before installation (see Commissioning chapter).

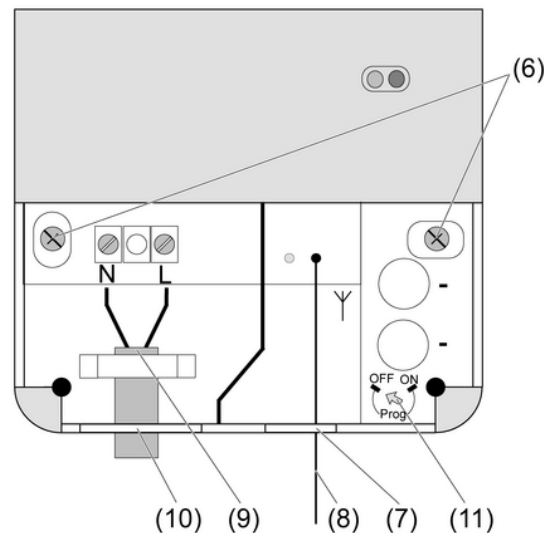


Figure 5

- Fasten repeater with 2 screws (6).
- Break out cable entry (10) and insert mains cable (9).
- Connect mains cable to the repeater.
- Teach transmitter into repeater (see Commissioning chapter).
- Fasten housing lid with screws.

Routing the antenna out of the housing

i Only permitted with protection rating IP 20.

If the radio reception capability of the repeater is not sufficient, it can be improved by routing out the antenna that is rolled up in the device.

- Slacken screws (5) and remove housing lid (4).
- Break out cable entry (7).
- Route antenna (8) out.
- Fasten housing lid with screws.

4.2 Commissioning

Teaching a radio transmitter

In order for the repeater to transmit the radio telegram of a transmitter, this transmitter has to be taught into the repeater.

While a transmitter is being taught the range of the repeater is reduced to approx. 5 m. The distance between the repeater and the transmitter being taught should therefore be between 0.5 m and 5 m.

- Turn **Prog** switch (11) to the **ON** position (Figure 5).
The red Prog LED (2) flashes (Figure 1).
- Trigger teach telegram on radio transmitter (see instructions for radio transmitter).
The radio transmitter has been taught. The green and red LEDs light up as an acknowledgement.

i When the radio transmitter is taught, all of the channels that are present, the All On, All Off and the light scene buttons are also taught.

- Turn **Prog** switch (11) to the **OFF** position.
Both LEDs go out.

Deleting radio transmitters

- Teach-in again the radio transmitter to be deleted.
The red LED lights up to confirm that a radio transmitter has been deleted.

5 Appendix



The symbol confirms the conformity of the product to the relevant guidelines.

5.1 Technical data

Rated voltage	AC 230 V ~
Mains frequency	50 / 60 Hz
Ambient temperature	-20 ... +55 °C
Protection rating	IP 20 / IP 54
Connection cable	1.5 m
Dimensions W×H×D	110×94×38 mm
Teachable radio transmitter	max. 60
Carrier frequency	433.42 MHz (ASK)
Transmitting range in free field	typical 100 m
Transmitting power	< 10 mW

5.2 Troubleshooting

Radio receiver does not respond, or only sometimes.

Cause 1: Radio range exceeded. Structural obstacles reduce the range.

Check routing of antenna. Laying the antenna stretched out increases the range (see chapter Routing the antenna out of the housing).

Cause 2: Incorrect switch setting **Prog** (11).

Turn **Prog** switch to the **OFF** position.

5.3 Warranty

We reserve the right to make technical and formal changes to the product in the interest of technical progress.

Our products are under guarantee within the scope of the statutory provisions.

If you have a warranty claim, please contact the point of sale or ship the device postage free with a description of the fault to the appropriate regional representative.

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