

RF communication

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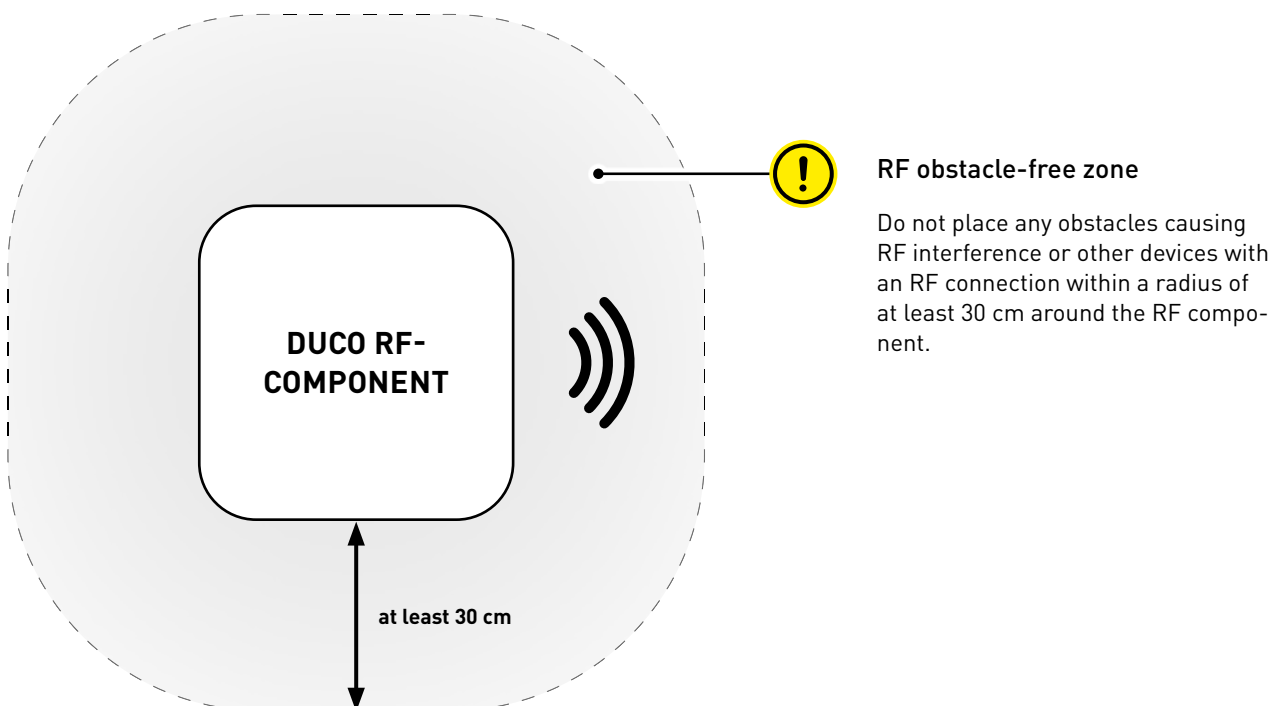
DUCO's Radio Frequency (RF) components were developed for wireless control of the DucoBox in a residential environment . They are produced and inspected with the utmost care. They guarantee a transmission range of 350 m in the free field . Certain obstacles (reinforcement in concrete, foil under laminate, metal door frames, other metal devices, insulated walls, underfloor heating...) can **weaken** or even **block** this signal.

DUCO RF specifications

Power supply	230 VAC
Frequency	868 MHz
Maximum distance	350 m, free field (less through obstacles)
Maximum number of components	Up to 25 wireless components in a single system

Guidelines & tips

- Position the DUCO components in such a way that **no metal parts are present between the two components**.
- Other wireless devices in the home can also prevent or completely block the RF signal from the DUCO components . They can cause a weakening or (temporary) complete loss of the wireless connection between the DUCO components.
- Keep a **minimum distance of 30 cm** around the RF component.



What in case of poor / no RF connection?

When slave components (e.g. user controller, Switch sensor...) cannot make a (strong) direct connection to the master (e.g. DucoBox Focus, IQ unit...), the system will **automatically** try to connect via **up to one** intermediate RF component (= hop) that is logged into the network. This intermediate component then acts as a **repeater**. All RF components, except the battery-powered ones, automatically act as repeaters.

If a component cannot make an RF connection to the master, relocate this component, if possible, to minimize signal interference. If this is not sufficient, an additional RF component can be used as a repeater. A switch sensor, which is easy to conceal thanks to its small size, is excellent for this purpose. Position the repeater so that the distance to be bridged is reduced and/or the signal is less obstructed by obstacles.

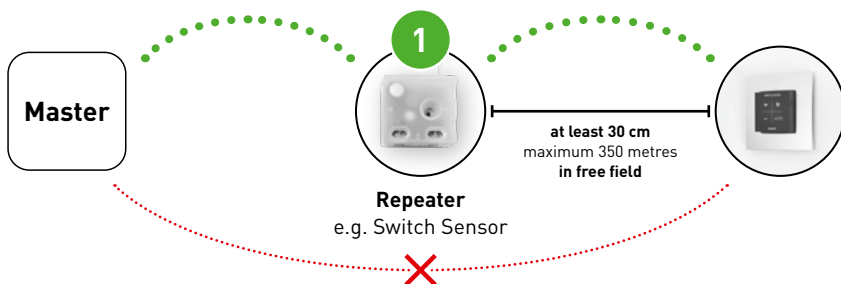


Due to the limit of a maximum of one hop per master-slave connection, using a repeater is not suitable for bridging very long distances or many obstacles such as multiple building layers. A Wired connection is recommended for such cases (and thus also Wired components).

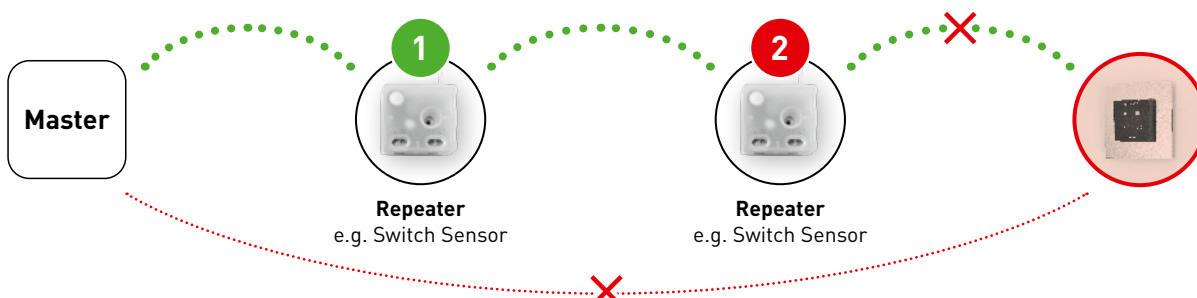
TIP: In case of problems, check the signal strength with the Duco Network Tool, which you obtain together with a cable after completing a training at the DUCO Academy.



The use of no more than 1 hop is allowed



Using multiple hops is NOT possible!



Example situations using repeater

