RADEMACHER

DuoFern radio transmitter 9497, flush-mounted
Operating and Assembly Manual

Item No.: 3200 00 62

VBD 597-3 (01.20)

1. General safety information

 The use of defective equipment can lead to personal injury and damage to property.
Never use defective or damaged equipment. Please contact our Customer Service department in this event .

2. Proper use

Proper use
Only use the DuoFern flush-mounted radio transmitter for the remote control of DuoFern devices such as:
◆ DuoFern switch actuators
◆ DuoFern tubular motor actuators
◆ DuoFern tubular motors or DuoFern belt winders, etc.

Operating conditions
◆ Only use the DuoFern flush-mounted radio transmitter in dry rooms.
◆ The installation and operation of the DuoFern radio system and its components (e.g. DuoFern tubular motor actuator) is only permitted for systems and devices where a malfunction in the transmitter or receiver would not cause a danger to personnel or property or where this risk is already covered by other safety equipment.
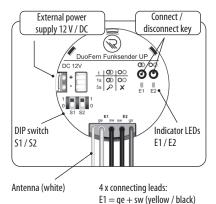
3. Improper use

Never use the DuoFern radio system and its components for the remote control of appliances and systems with increased safety-relevant requirements or where there is an accident risk. This shall require additional safety equipment. Observe the respective statutory regulations for the installation of such systems.
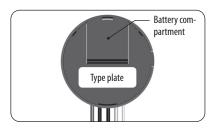
3. Improper use

IMPORTANT
◆ Do not install the DuoFern radio transmitter outside.
◆ Never simultaneously connect / insert a battery and external power supply. Doing so will damage the battery and may cause it to leak.
◆ The connecting wires may not be extended.

4. General view - front

External power supply 12 V / DC

Connect / disconnect key

DIP switch S1 / S2

Indicator LEDs E1 / E2

Antenna (white)

4 x connecting leads:
E1 = ge + sw (yellow / black)
E2 = sw + gn (black / green)

4.1 General view - back

Battery compartment

Type plate

4.2 Functional description

The DuoFern flush-mounted radio transmitter enables existing commercially available switches or switch systems to be upgraded with DuoFern radio technology. Multiple DuoFern actuators or other DuoFern devices can be controlled with the help of the connected switch and switches can be remotely controlled once the DuoFern flush-mounted radio transmitter has been registered in the DuoFern network.

In addition, control signals from movement sensors or window contacts can be used for control purposes.

The mode setting and input configuration is realised with the help of the two selector switches **S1/S2**.

4.3 Configuration of the DuoFern radio transmitter and assignment of control commands

Connected actuator	2 X SINGLE BUTTONS OR 1 X BUTTON IN SERIES	2 X SINGLE SWITCHES OR 1 X SWITCH IN SERIES	VENETIAN BLINDS BUTTON	VENETIAN BLINDS SWITCH	SENSOR FUNCTION * (e. g. external Window/Door Contact)
Applications	Switch positions - S1 / S2				
Switch actuator e.g. DuoFern Universal Actuator with electrical appliance	1/0 S1 1/0 S2	1/0 S1 1/0 S2			
	Maximum 1 actuator per switch	Maximum 16 actuators			
Transmission >	on / off	on / off			
Dimming actuator e.g. DuoFern Universal Dimmer	1/0 S1 1/0 S2		1/0 S1 1/0 S2		
	Maximum 1 actuator per switch		Maximum 16 actuators		
Transmission >	on / stop / off / stop		Jog mode: light / dark > 1 sec. on / off		
Roller shutter / Venetian blinds actuators e.g. DuoFern tubular motor actuator	1/0 S1 1/0 S2		1/0 S1 1/0 S2	1/0 S1 1/0 S2	
	Maximum 1 actuator per switch		Maximum 16 actuators	Maximum 16 actuators	
Transmission >	up / stop / down / stop		Jog mode: up /down > 1 sec. up / down	Up / Stop / Down	
HomePilot®	1/0 S1 1/0 S2	1/0 S1 1/0 S2	1/0 S1 1/0 S2	1/0 S1 1/0 S2	1/0 S1 1/0 S2
	Maximum 1 HomePilot®	Maximum 16 HomePilot®	Maximum 16 HomePilot®	Maximum 16 HomePilot®	
Transmission >	Push	on / off	Jog mode: up /down > 1 sec. up / down	Up / Stop / Down	Closed / Open

* Select this setting to use the DuoFern radio transmitter in HomePilot® as a sensor for „contact open / closed".

5. Assembly

 During both installation and dismounting of the DuoFern flush-mounted radio transmitter there is a risk of fatal electric shocks.

Observe the safety instructions for electrical connection in chapter 7 prior to installation.

The DuoFern flush-mounted radio transmitter is designed for flush-mounting only. **We recommend using a 58 mm deep box.**

NOTE
In order to ensure optimal operation, the DuoFern flush-mounted radio transmitter should not be installed on a metallic base or near metal objects.

5.1 Installation procedure

1. If an additional mains-powered installation is installed near the installation site. The mains power must be deactivated prior to installation.
2. Electrical connection in accordance with chapter 7.
3. Register the DuoFern flush-mounted radio transmitter in the DuoFern radio network, see chapter 8.
4. Insert the DuoFern radio transmitter in the flush-mounted box and lay the connecting cables in the box.
   ATTENTION - ANTENNA CABLE
   ◆ Fit the antenna as straight as possible to ensure the best possible reception.
5. Fit the connected potential-free button or switch.
6. Switch the mains power again back on again, if necessary.

6. Dismantling

1. If an additional mains-powered installation is installed near the installation site. The mains power must be deactivated prior to disassembly.
2. Open the switch box.
3. Pull out the existing button / switch as well as the DuoFern flush-mounted radio transmitter from the switch box and disconnect them from each other.
4. Restore the safe initial state of the switch installation again.

7. Electrical connection

Safety instructions
There is a risk of fatal electric shocks.
The electrical connection and all work on electrical systems must only be carried out by a qualified electrician in accordance with the connection instructions in these operating instructions.

◆ Carry out all installation and connection work only in an isolated, zero-volts state.

◆ Disconnect all phases of the lead from one of the switch installations at the installation site and secure it to prevent any reconnection.

◆ Check the system for a zero-voltage status.

Connecting conditions:
Potential-free inputs E1 / E2:
Connection of mains voltage to inputs E1 and E2 will create a short-circuit and cause the DuoFern flush-mounted radio transmitter to be damaged.

Only potential-free contacts (buttons or switches) may be connected to inputs E1 / E2.
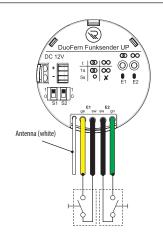
Input 12 V DC
Supply voltage: 12 V
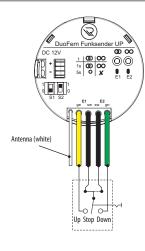Power: min. 0.5 W

7.1 Connection of two buttons or switches

7.2 Connection of a Venetian blinds button or switch

8. Login of DuoFern end units

You must assign the DuoFern radio transmitter to **every** required DuoFern device in order that the DuoFern flush-mounted radio transmitter can be used to control a DuoFern actuator or other DuoFern device. In order to log-on and log-off, press the corresponding button with a pointed (but not sharp) object, for example, with a pen:

= connect button (log-in)

= disconnect button (log-off)

NOTE
Registering mode remains active for approx. 120 seconds.

8.1 Registration of DuoFern end units where S1 = 1

1. **Switch the respective DuoFern end unit to login mode (please refer to the relevant operating instructions).**
2. **Briefly press the connect button on the DuoFern flush-mounted radio transmitter, both indicator LEDs E1 / E2 flash green.**
3. **Indicator LEDs E1 and E2 additionally light up red on successful registration.**
4. **In order to assign a channel to the DuoFern end unit press the respective button / switch on input E1 or E2.**
4.1. **In the event of multi-channel DuoFern end units (e.g. DuoFern universal actuator) Point 4 repeat for the next channel.**

    NOTE
    If the current channel cannot be assigned for a DuoFern actuator, please briefly press the disconnect.

8.1 Registration of DuoFern end units where S1 = 1

5. **Observe the respective E1 or E2:**

    Green: Login was successful.
    Red: Login failed.

8.2 Registration of DuoFern end units where S1 = 0

1. **Switch the respective DuoFern end unit to login mode (please refer to the relevant operating instructions).**
2. **Briefly press the connect button DuoFern flush-mounted radio transmitter.**
3. **Observe the respective indicator LED E1 / E2:**

    Green: Login was successful.
    Red: Login failed.

8.3 Logging-out DuoFern end units

1. **Switch the respective DuoFern end unit to logout mode (please refer to the relevant operating instructions).**
2. **Briefly press the disconnect button on the DuoFern flush-mounted radio transmitter.**
3. **Observe the respective indicator LED E1 / E2:**

    Green: Log off was successful.
    Red: Log off failed.

    NOTE
    All of the channels of the DuoFern actuator are logged-off simultaneously.

9. Clear

This function logs off all of the registered DuoFern end units that no longer react. This could be necessary with a faulty unit, for instance, that can no longer be logged off, as described previously in chapter 8.3.

NOTE
◆ Battery-operated DuoFern devices cannot be logged off in this way. They must be logged-off by resetting, see chapter 10.

1. **Press and hold the connect button for approx. 5 seconds until both indicator LEDs E1 / E2 flash.**
2. **The DuoFern flush-mounted radio transmitter now transmits a control signal to all registered DuoFern end units.**

    Unavailable DuoFern end units are automatically logged-off.

3. **Clearing is complete as soon as the indicator LEDs E1 / E2 light up continuously green.**

10. Deleting all settings (Reset)

1. **Press and hold the disconnect button until both indicator LEDs E1 / E2 light up red.**
2. **All connections will be deleted. The DuoFern flush-mounted radio transmitter is now returned to its original factory condition.**

11. Battery replacement

1. **Open the battery compartment cover and carefully slide the battery out of the compartment, for example, using a thin pen.**
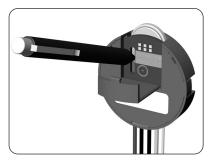2. **Replace the battery with a new one of the same type (CR 2032).**

    IMPORTANT
    When inserting the battery, pay attention to the correct polarity. The position of the negative terminal is labelled on the battery compartment.

3. **Close the battery compartment again until you hear it click into place.**

    NOTE
    Empty batteries are special waste and should not be disposed of with household waste.

12. Simplified EU Declaration of Conformity

RADEMACHER Geräte-Elektronik GmbH hereby declares that the DuoFern radio transmitter 9497 flush-mounted complies with the Directive **2014/53/EU (Radio Equipment Directive)**.

The full text of the declaration of conformity is available at the following website:

www.rademacher.de/ce

13. Technical Specifications

Supply voltage	
- with internal battery:	3 V DC
- with external connection:	12 V DC
Battery type:	3 V / CR 2032
Battery life:	
- in normal operation	approx. 12,000 control commands
- in Standby:	approx. 5 years
Transmission power:	max. 10 mW
Range:	
- in a building (depending on construction):	approx. 30 m
- outside:	approx. 100 m
Transmission frequency:	434.5 MHz
Max. number of DuoFern end units:	16
Permissible ambient temperature range:	+ 5 °C to + 40°C
Dimensions (diameter x D):	50 x 11 (mm)

14. Warranty conditions

RADEMACHER Geräte-Elektronik GmbH provides a 24-month warranty for new systems that have been installed in compliance with the installation instructions. All construction faults, material defects and manufacturing defects are covered by the warranty.

Your statutory warranty claims shall remain unaffected by this warranty.

The following are not covered by the warranty:
◆ Incorrect fitting or installation
◆ Non-observance of the installation and operating instructions
◆ Improper operation or wear and tear
◆ External influences, such as impacts, knocks or weathering
◆ Repairs and modifications by third party, unauthorised persons
◆ Use of unsuitable accessories
◆ Damage caused by unacceptable excess voltage (e.g. stroke of lightning)
◆ Operational malfunctions caused by radio frequency overlapping and other such radio interference

A prerequisite for the warrant is that the new device must have been purchased from one of our approved specialist retailers. Proof of this must be provided by presenting a copy of the bill.

RADEMACHER shall remedy any defects, which occur within the warranty period free of charge either by repair or by replacement of the affected parts or by supply of a new replacement unit or one to the same value. There is no general extension of the original warranty period by delivery of a replacement or by repair as per the terms of the warranty.