EN

DuoFern sun sensor

Item no:
3200 00 69

With your purchase of a **DuoFern sun sensor** , you have chosen a quality product manufactured by RADEMACHER. Thank you for the trust you have placed in us.

This product has been developed with the greatest possible convenience and optimum user-friendliness in mind. Having applied uncompromising quality standards, and carried out thorough testing, we are proud to be able to present you with this innovative product.

It's brought to you by all the highly-qualified personnel
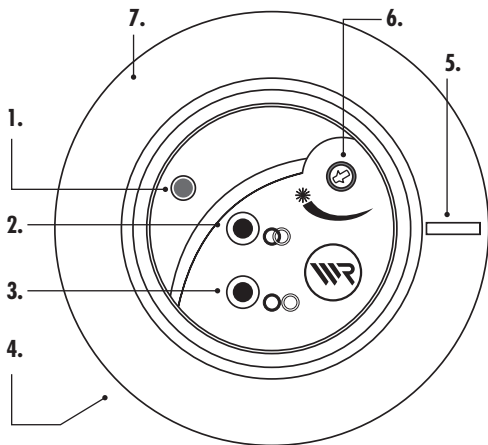here at RADEMACHER.

These instructions...

...describe how to install and operate the **DuoFern sun sensor**.

Before you begin, please read these instructions through completely and follow all the safety instructions. Please store these instructions in a safe place and pass them on to any future owners.

Damage resulting from non-compliance with these instructions and safety instructions will void the guarantee. We assume no liability for any consequential damage.

Legend

1. Status LED (red/green)
2. Connect button **[⦾]**
   - 1 x = Login mode
   - 2 x = Test
   - 5 Sec. = Purging
3. Disconnect button **[◯◎]**
   - 1 x = Logout mode
   - 2 x = Set sunshine position
   - 5 Sec. = Reset
4. Solar cell (on the bottom)
5. Pulling grip
6. Rotary controller (sensitivity to sunlight)
7. Sucker

This concerns your safety.

Please pay particular attention and carefully follow all instructions marked with this symbol.

NOTE/IMPORTANT/CAUTION

This is to draw your attention to information that is important for trouble-free operation.

Please read the operating instructions for an external device described at this point, (e.g. a tubular motor actuator).

i **3. 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 .

IMPORTANT

Avoid damaging the sun sensor. Only remove the sensor from the window using the pulling handle **(5)**.

i **4. Proper use**

Only use the **DuoFern sun sensor** for brightness-dependent control of DuoFern actuators.

Operating conditions:

◆ Only fit and operate the DuoFern sun sensor in dry rooms.

◆ The installation and operation of the DuoFern radio system and its components (e.g. DuoFern sun sensor) is only permitted for those 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.

◆ 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 would require additional safety equipment. Observe the respective statutory regulations for the installation of such systems.

i   6. Functional description

You can use the **DuoFern sun sensor** to control multiple DuoFern actuators (e.g. for blinds or electrical consumers) on a brightness-dependent basis. To do this, secure the sun sensor to the window pane using the sucker **(7)**.

The power supply

The power supply for the DuoFern sun sensor is through a solar cell **(4)** on the bottom which charges up an internal energy store.

The controls

The DuoFern sun sensor has three controls:

◆ **(2)** Connect button **[⦾]**
◆ **(3)** Disconnect button **[◯◎]**
◆ **(6)** Rotary controller

The connect button **(2)** and the disconnect button **(3)** have multiple functions which are described in more detail in the chapters below. The rotary controller **(6)** is used to adjust sensitivity to sunlight directly on the DuoFern sun sensor.

Requirements for correct functionality:

◆ The DuoFern sun sensor needs to be fully charged (see page 22/23).
◆ The DuoFern sun sensor needs to be registered with all actuators required.
◆ The automated solar functions for the relevant actuator must be activated and the sunshine position set.
◆ The actuators must be within the radio range of the DuoFern sun sensor (10 m).

The DuoFern sun sensor measures the current brightness. Light sensitivity can be adjusted using the rotary controller **(6)**.

High
light sensitivity

Low
light sensitivity
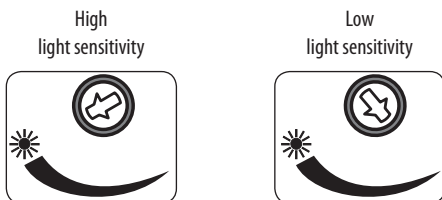
NOTE

Adjust the brightness to the level at which the blinds should be closed.

Note the status LED (1), which lights up as follows:

◆ **2 x green**, if the current brightness is greater than the light sensitivity set.

◆ **2 x red**, if the current brightness is less than the light sensitivity set.

◆ **no lights**, if the current brightness is outside the measuring range of the DuoFern sun sensor.

The automated solar functions are activated …:

◆ if the **current brightness goes over the brightness set** for 10 minutes. A switching command is then sent to the actuators registered.

The automated solar functions are stopped …:

◆ if the **current brightness goes below the brightness set** for 20 minutes. A signal is also sent to the actuators registered.

◆ if the DuoFern sun sensor's energy store is empty.

Please read the operating instructions for the relevant actuator in order to adjust all relevant actuator-specific settings on the automated solar functions. Some settings may need to be changed on the actuator to implement the sunshine position correctly.

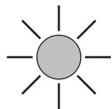Check the following settings in the relevant actuator.

◆ Runtime

◆ Sunshine position

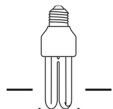The DuoFern sun sensor needs to be fully charged up before it can be successfully commissioned.

To do this, hold the solar cell of the DuoFern sun sensor towards a light source (the sun or an 11 Watt energy-saving bulb) until the status LED **(1)** flashes red.

Charging time:

approx. 25 min.   approx. 10 min.

⚠ **CAUTION**

◆ Halogen bulbs / LEDs and standard light bulbs are not suitable for charging the DuoFern sun sensor.

◆ The radiated heat from these bulbs can damage the sun sensor.

i   **8. Correct position of the DuoFern sun sensor**

Secure the DuoFern sun sensor as far down window pane as possible using the sucker.

◆ Position the DuoFern sun sensor to allow the sunlight to fall onto the sensor with as little impediment as possible.

◆ Make sure the fixing point is as free as possible of grease and dust to ensure the sensor sticks well.

⚠ **The DuoFern sun sensor must not be shaded at any point.**

A shadow must not be cast over the DuoFern sun sensor either by the blinds moving into the sunshine position or by trees or similar.

You must register the DuoFern sun sensor with **every required actuator** so that the DuoFern sun sensor can control the DuoFern actuator you wish. You can register the DuoFern sun sensor with a maximum of five DuoFern actuators.

NOTE
All settings can only be made when the sun sensor is charged up. If the internal energy store has run out of charge, the status LED **(1)** flashes red twice. If this happens, you need to recharge the sun sensor (see page 22).

1.		Switch the DuoFern actuator to login mode (please refer to the relevant operating instructions).
2.		Press the **Connect button (2) quickly once**.
3.	The DuoFern sun sensor now transmits a login signal. Login mode remains active for 10 seconds.	
4.	If registration is successful, the status LED **(1)** lights up green for two seconds.	
5.	Register the next DuoFern actuator by repeating 1 to 2, or exit login mode.	

NOTE
The status LED **(1)** lights up red for two seconds if the login process fails, for example if:

◆ the maximum number of registrations **(max. 5 actuators)** for the DuoFern sun sensor has already been reached.

◆ the maximum number of registrations has already been reached for the DuoFern actuator.

◆ an unsuitable device (e.g. other DuoFern sensor) is registered.

◆ the login period expired without an actuator being logged in.

| **1.** | | Switch the DuoFern actuator to logout mode (please refer to the relevant operating instructions). |

| **2.** | ⬤◯ | Press the **Disconnect button (3) quickly once**. |

3. The DuoFern sun sensor now transmits a logout signal. Logout mode remains active for 10 seconds.

4. If the logout process is successful, the status LED **(1)** lights up green for two seconds.

5. Log the next DuoFern actuator out by repeating 1 to 2, or exit logout mode.

NOTE
The status LED **(1)** lights up red for two seconds if the logout process fails, for example if:

◆ an attempt is made to logout a DuoFern actuator that is not logged on.

◆ the logout period expired without an actuator being logged out.

◆ an error occurred.

i   **11. Starting a connection test (test ping)**

With this function you can test whether the actuators you want are within the radio range of the DuoFern sun sensor.

| **1.** | ◯◯ | Press the **Connect button (2) quickly twice**. |

2. The DuoFern sun sensor now transmits a test signal to all the actuators registered.

3. Each actuator has a specific reaction to confirm the test signal (please read the operating instructions for the relevant actuator).

If an actuator is unavailable, you can use this function to permanently log the actuator off of the DuoFern sun sensor. An unavailable actuator increases the energy consumption of the DuoFern sun sensor unnecessarily and should be avoided.

1. Press the **Connect button (2) for 5 seconds**.

2. Note the status LED **(1)**, which:

◆ flashes red while „Purging" is active

◆ lights up green for two seconds once „Purging" is complete.

i **13. Apply the current sunshine position**

This function can be used to force the actuators to apply the current position of the blinds as the sunshine position.

1. Move the blinds manually to the desired sunshine position.

2. Press the **Disconnect button (3) quickly twice**.

3. The DuoFern sun sensor then transmits a signal to every actuator registered.

4. Every actuator registered applies the current position of the blinds as the new sunshine position.

NOTE

Read the operating instructions for the relevant actuators and check the actuator settings for the „Runtime"

Resetting deletes or logs off all registered actuators. The light sensitivity set using the rotary controller **(6)** is not reset.

1.   🖐●   ◯◯ Press the **Disconnect button (3) for 5 seconds**.

2. The DuoFern sun sensor is now returned to the original supplied state.

i   **15. Technical Specifications**

Supply voltage:	from solar cell
Charging time:	approx. 10 to 25 minutes
Transmission frequency:	434.5 MHz
Transmission power:	10 mW
Transmission range:	approx. 10 m
Dimensions:	D = 75 mm / H = 26.5 mm
Max. number of actuators:	5

The **DuoFern sun sensor** (item no. 3200 00 69) complies with the requirements of the current European and national directives.

1999/5/EC	**R&TTE directive**
2006/95/EC	**Low voltage directive**
2004/108/EC	**EMC directive**

Conformity has been verified. The corresponding declarations and documentation are available on file at the manufacturer's premises.

RADEMACHER Geräte-Elektronik GmbH & Co. KG
Buschkamp 7
46414 Rhede (Germany)