

Hormann 436233

Hormann EL301 Disposable Light Barrier Instruction Manual

Model: EL301 (Part No. 436233)

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Hormann EL301 Disposable Light Barrier. Please read these instructions carefully before beginning installation or use. Keep this manual for future reference.

The Hormann EL301 is designed for use as an additional safety device in both indoor and outdoor environments. It helps detect obstructions in the path of automated systems, such as garage doors or gates, enhancing overall safety.

Safety Information

- Ensure all electrical connections are made by a qualified electrician and comply with local regulations.
- Disconnect power before performing any installation, maintenance, or repair work.
- Do not modify the device in any way. Unauthorized modifications can lead to malfunction and void the warranty.
- The device is rated IP65, providing protection against dust and low-pressure water jets. However, avoid submerging the unit.
- Regularly inspect the light barrier for any signs of damage or obstruction.

2. COMPONENTS INCLUDED

Verify that all components listed below are present in your package:

- 2 x EL301 Photocell Units (Transmitter and Receiver)
- 2 x Mounting Brackets
- 2 x 10m Connection Cables (2-wire round cable)
- Mounting Hardware (screws, anchors - typically included)

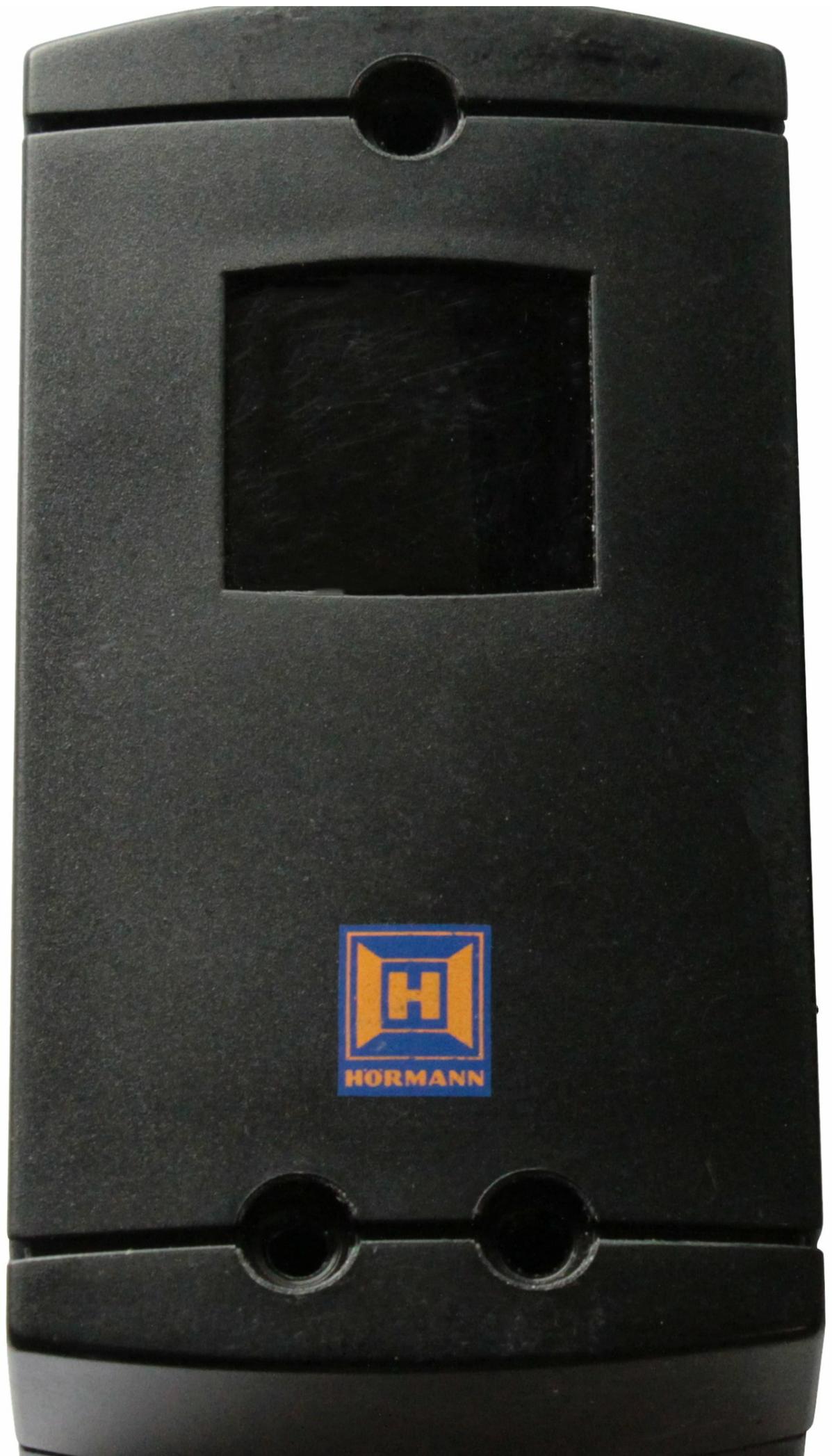




Figure 1: Overview of Hormann EL301 Light Barrier components.

3. INSTALLATION AND SETUP

Follow these steps for proper installation of your EL301 light barrier:

1. **Choose Mounting Location:** Select a location where the transmitter and receiver units can be mounted directly opposite each other, ensuring an unobstructed line of sight. The height should be appropriate for detecting the intended objects (e.g., vehicle bumpers, people).
2. **Mounting Brackets:** Securely attach the mounting brackets to a stable surface using the provided hardware. Ensure they are level and aligned.
3. **Install Photocell Units:** Slide the EL301 photocell units onto the mounting brackets. The units should face each other.
4. **Wiring:**
 - Connect the 2-wire connection cables to the respective terminals on each photocell unit. Refer to your automated system's manual for specific wiring diagrams for the control unit.
 - The EL301 units are typically connected to the safety input of a gate or garage door operator.
 - Ensure proper polarity if specified by your control unit.
5. **Alignment:** Once powered, align the transmitter and receiver units. Most units have an indicator light that illuminates or changes color when proper alignment is achieved. Adjust the position of the units until the indicator shows a strong signal.
6. **Test Functionality:** After alignment, test the light barrier by breaking the beam with an object. The automated system should react as expected (e.g., stop or reverse).



Figure 2: Hormann EL301 Photocell Units.

4. OPERATION

The Hormann EL301 Light Barrier operates by emitting an infrared beam from the transmitter unit to the receiver unit. When this beam is interrupted by an object, the receiver signals the connected control unit (e.g., gate or garage door operator) to perform a predefined safety action, such as stopping or reversing movement.

The system is continuously active when the connected automated system is powered on. No user interaction is typically required for its operation once properly installed and aligned.

5. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of your light barrier:

- **Cleaning:** Periodically clean the lenses of both the transmitter and receiver units with a soft, damp cloth. Dust, dirt, spiderwebs, or other debris can obstruct the beam and cause false triggers or malfunctions.
- **Inspection:** Regularly check the mounting brackets and cables for any signs of damage, corrosion, or loose connections. Ensure the units remain securely mounted and properly aligned.
- **Environmental Protection:** While rated IP65, extreme weather conditions (heavy snow, ice, prolonged heavy rain) can temporarily affect performance. Ensure proper drainage around the units.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Light barrier not functioning / System not responding.	No power to units. Misalignment of transmitter/receiver. Obstructed beam (dirt, debris). Faulty wiring.	Check power supply to the control unit and photocells. Re-align units until indicator light confirms proper alignment. Clean lenses thoroughly. Inspect wiring for loose connections or damage.
False triggers / System stops without obstruction.	Partial beam obstruction (spiderwebs, leaves). Poor alignment. Strong sunlight directly hitting receiver.	Clean lenses and clear any debris. Fine-tune alignment. Consider adding a small hood or shield to the receiver if direct sunlight is an issue.

7. SPECIFICATIONS

Model	EL301
Part Number	436233
Brand	Hormann

Protection Class	IP65 (Dust tight and protected against low-pressure water jets)
Application	Indoor and Outdoor
Connection Cable	2 x 10m round cable, 2 wires
Dimensions (L x W x H)	20 x 15 x 3.5 cm
Weight	630 grams
Material	Plastic
Country of Origin	Germany

8. WARRANTY AND SUPPORT

For warranty information and technical support, please contact your authorized Hormann dealer or visit the official Hormann website. Keep your proof of purchase for any warranty claims.

Note: The manufacturer continually strives to improve its products. Therefore, the information in this manual may be subject to change without prior notice.
