GTO FM139

GTO FM139 Exit Wand Vehicle Gate Sensor Instruction Manual

Model: FM139

1. Introduction

The GTO FM139 Exit Wand Vehicle Gate Sensor is designed to provide automatic gate opening for vehicles exiting a property. This inductive loop sensor detects large metallic objects, such as vehicles, passing over it, signaling the gate opener to activate. This manual provides detailed instructions for the proper installation, operation, and maintenance of your FM139 Exit Wand.

Image 1.1: GTO FM139 Exit Wand Vehicle Gate Sensor. This image shows the main unit of the exit wand with its attached 50-foot cable, ready for installation.

2. Safety Information

Read all instructions carefully before installation and operation. Failure to follow these instructions may result in injury or damage to the product or property.

- Always disconnect power to the gate opener system before performing any wiring or maintenance.
- Ensure all electrical connections are secure and protected from moisture.
- Bury the sensor and cable at the recommended depth to prevent damage and ensure proper operation.
- Keep children and pets away from the gate area during installation and operation.
- This device is designed for vehicle detection only. Do not rely on it for pedestrian safety.

3. Package Contents

Verify that all components are present before beginning installation:

- GTO FM139 Exit Wand Vehicle Gate Sensor
- 50-foot (15.24 meter) connecting cable (pre-attached)
- Instruction Manual (this document)

4. Setup and Installation

4.1. Site Preparation

- Determine the optimal placement for the exit wand. It should be positioned where vehicles will pass directly over it when exiting, typically 10-15 feet (3-4.5 meters) from the gate.
- Ensure the area is clear of large metallic objects (other than the vehicle) that could cause false triggers.
- Dig a trench approximately 6-8 inches (15-20 cm) deep from the desired sensor location to the gate opener control box.

4.2. Sensor Placement

- Place the FM139 exit wand horizontally in the trench at the chosen detection point.
- Ensure the wand is level and stable.

4.3. Wiring

The FM139 exit wand comes with a 50-foot (15.24 meter) cable. Connect this cable to your gate opener control board as follows:

1. Route the cable through the trench to the gate opener control box.
2. Refer to your specific gate opener's manual for the correct terminals to connect the exit wand. Typically, the wand will connect to a "Common" or "Ground" terminal and an "Exit Loop" or "Trigger" terminal.
3. Strip approximately 1/4 inch (6 mm) of insulation from the end of each wire.
4. Securely connect the wires to the designated terminals on the control board. Ensure a tight connection to prevent intermittent operation.

Note: If the 50-foot cable is not long enough, you may extend it using direct burial, shielded, low-voltage cable of appropriate gauge. Ensure all splices are waterproofed.

4.4. Backfilling

- Once the sensor is placed and wired, carefully backfill the trench, ensuring the cable and sensor are not damaged.
- Compact the soil to prevent settling.

5. Operating Instructions

The GTO FM139 Exit Wand operates automatically. Once installed and connected to a compatible gate opener system, it will detect the presence of a vehicle and trigger the gate to open.

- When a vehicle passes over the buried sensor, the sensor detects the change in the earth's magnetic field caused by the metal mass.
- This detection sends a signal to the gate opener control board.
- The gate opener then initiates its opening cycle.
- The gate will remain open for the duration set by the gate opener's auto-close timer, or until another closing command is issued.

Important: The sensitivity of the wand is factory set and generally does not require adjustment. Ensure the gate opener's settings are configured to accept input from an exit device.

6. Maintenance

The GTO FM139 Exit Wand is designed for minimal maintenance due to its buried installation. However, periodic checks can help ensure long-term reliability:

- **Cable Inspection:** Annually inspect any exposed portions of the cable for signs of damage, wear, or rodent activity. Repair or replace damaged sections promptly.
- **Connection Check:** Periodically check the wiring connections at the gate opener control board to ensure they remain secure and free from corrosion.
- **Area Clearance:** Ensure the area above the buried sensor remains clear of large metallic debris or new installations that could interfere with its operation.

7. Troubleshooting

If your GTO FM139 Exit Wand is not functioning as expected, review the following common issues and solutions:

Problem	Possible Cause	Solution
Gate does not open when vehicle passes over wand.	◦ Incorrect wiring. ◦ Damaged cable or sensor. ◦ Gate opener settings not configured for exit device. ◦ Sensor buried too deep or too shallow.	◦ Verify wiring connections at the control board according to your gate opener manual. ◦ Inspect cable for breaks or damage. Test sensor continuity if possible. ◦ Check gate opener control board settings to ensure the exit input is enabled. ◦ Ensure sensor is buried at the recommended 6-8 inch depth.

Problem	Possible Cause	Solution
Gate opens randomly or falsely triggers.	◦ Interference from other metallic objects. ◦ Loose wiring connection. ◦ Sensor too close to other magnetic fields or power lines.	◦ Ensure no large metallic objects are permanently positioned over or near the sensor. ◦ Check and tighten all wiring connections. ◦ Relocate the sensor if it is too close to known sources of electromagnetic interference.
Short detection range.	◦ Sensor buried too deep. ◦ Small vehicle type (e.g., motorcycle) not consistently detected.	◦ Verify sensor depth is within the recommended range. ◦ Consider adjusting the gate opener's sensitivity settings if available, or repositioning the sensor slightly.

8. Specifications

- **Model Number:** FM139
- **Cable Length:** 50 feet (15.24 meters)
- **Detection Type:** Inductive Loop / Magnetic Field
- **Recommended Burial Depth:** 6-8 inches (15-20 cm)
- **Package Dimensions:** 21 x 4.5 x 3 inches (53.34 x 11.43 x 7.62 cm)
- **Item Weight:** 3.69 pounds (1.67 kg)
- **ASIN:** B074CDXFN3
- **Manufacturer:** GTO
- **Date First Available:** December 10, 2017

9. Warranty Information

This product is covered by a limited manufacturer's warranty. Please refer to the warranty card included with your purchase or visit the manufacturer's official website for detailed terms and conditions, including warranty period and claim procedures. Keep your proof of purchase for warranty service.

10. Customer Support

For technical assistance, troubleshooting beyond this manual, or to inquire about replacement parts, please contact GTO customer support. Contact information can typically be found on the manufacturer's website or on the product packaging.
When contacting support, please have your product model number (FM139) and proof of purchase readily available.