

IFM EFECTOR OGD592

IFM EFECTOR OGD592 Photoelectric Distance Sensor User Manual

Model: OGD592

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the IFM EFECTOR OGD592 Photoelectric Distance Sensor. Please read this manual thoroughly before using the device.

The OGD592 is a compact M18 photoelectric distance sensor designed for precise object detection and distance measurement in industrial applications. It features a robust design and reliable performance.

2. SAFETY INSTRUCTIONS

- Installation and maintenance must be performed by qualified personnel only.
- Disconnect power before performing any installation or maintenance work.
- Ensure proper grounding to prevent electrical shock.
- Do not exceed the specified operating voltage and current ratings.
- Protect the sensor from mechanical damage and extreme environmental conditions.
- Adhere to all local and national safety regulations.

3. PRODUCT OVERVIEW

The IFM EFECTOR OGD592 is a photoelectric distance sensor with an M18 threaded housing. It utilizes a diffuse reflection principle to detect objects and measure distances within its specified range.



Figure 1: IFM EFECTOR OGD592 Photoelectric Distance Sensor. This image shows the side view of the sensor, highlighting its M18 threaded body for mounting and the M12 connector for electrical connection. The sensor housing is metallic gray with black and orange accents on the control panel side.

Key Features:

- **Model:** OGD592
- **Sensor Type:** Photoelectric Distance Sensor
- **Housing:** M18 threaded
- **Detection Range:** 0.03 - 0.3 meters
- **Output:** DC PNP, 2xNO/NC (Normally Open/Normally Closed)
- **Connection:** M12 connector

4. INSTALLATION

4.1 Mounting

1. Select a suitable mounting location that provides a clear line of sight to the target object and is free from excessive vibration or interference.
2. Mount the sensor using the M18 thread. Ensure it is securely fastened.
3. Position the sensor so that its optical axis is perpendicular to the target surface for optimal performance.

4.2 Wiring

The OGD592 sensor uses an M12 connector for electrical connection. Refer to the following wiring diagram:

Table 1: M12 Connector Pin Assignment

Pin	Color (M12 Cable)	Description
1	Brown	+V (Operating Voltage)
2	White	Output 2 (NO/NC configurable)
3	Blue	0V (Ground)
4	Black	Output 1 (NO/NC configurable)

Connect the sensor to a stable DC power supply within the specified voltage range. Ensure correct polarity.

5. SETUP AND CONFIGURATION

The OGD592 sensor typically features teach-in functionality or potentiometer adjustments for setting the detection range. Specific configuration details may vary. Refer to the detailed product datasheet for precise instructions on setting the switching points or distance thresholds.

5.1 Range Adjustment

- **Potentiometer Adjustment:** If equipped, rotate the potentiometer (usually located on the sensor body) to adjust the detection range. Turn clockwise to increase the range, counter-clockwise to decrease.
- **Teach-in Function:** For models with teach-in, follow the sequence of pressing a button (if present) while presenting and removing the target object to set the switching point. Consult the datasheet for the exact teach-in procedure.

5.2 Output Configuration (NO/NC)

The OGD592 offers 2xNO/NC outputs. The output function (Normally Open or Normally Closed) is typically configurable via a switch or teach-in process. Ensure the output configuration matches your application requirements.

6. OPERATION

Once installed and configured, the OGD592 sensor operates automatically. It continuously emits light and detects reflected light from objects within its sensing range. When an object enters or leaves the configured detection zone, the corresponding output switches state.

6.1 Status Indicators

The sensor may include LED indicators to provide visual feedback on its operational status:

- **Power LED:** Indicates that the sensor is powered on.
- **Output Status LED:** Illuminates when the output is switched (e.g., object detected).

7. MAINTENANCE

The OGD592 sensor is designed for low maintenance. Regular inspection and cleaning are recommended to ensure optimal performance.

- **Cleaning:** Keep the optical surfaces (lens) clean and free from dust, dirt, and debris. Use a soft, lint-free cloth and, if necessary, a mild cleaning solution. Do not use abrasive materials.

- **Inspection:** Periodically check the sensor's mounting and cable connections for tightness and signs of wear or damage.
- **Environmental Conditions:** Ensure the sensor operates within its specified temperature and humidity ranges.

8. TROUBLESHOOTING

Table 2: Common Troubleshooting Steps

Problem	Possible Cause	Solution
Sensor not powering on (no LEDs)	No power supply; incorrect wiring; faulty sensor.	Check power supply voltage and connections. Verify wiring according to diagram. Replace sensor if faulty.
Sensor not detecting objects	Dirty lens; incorrect range setting; object out of range; interference.	Clean the lens. Adjust the detection range. Ensure object is within 0.03-0.3m. Check for reflective surfaces or strong ambient light.
Erratic or unstable detection	Vibration; unstable mounting; electrical noise; reflective background.	Securely mount the sensor. Check for sources of electrical interference. Reposition sensor or target to avoid reflective backgrounds.

9. SPECIFICATIONS

Table 3: Technical Specifications

Parameter	Value
Model	OGD592
Brand	IFM EFECTOR
Sensor Type	Photoelectric Distance Sensor
Housing Dimensions	M18 threaded
Detection Range (R)	0.03 - 0.3 meters
Output Type	DC PNP
Output Function	2xNO/NC (Normally Open/Normally Closed)
Connection	M12 Connector
Operating Voltage	<i>(Not provided, refer to datasheet)</i>
Current Consumption	<i>(Not provided, refer to datasheet)</i>
Protection Rating	<i>(Not provided, refer to datasheet)</i>
Operating Temperature	<i>(Not provided, refer to datasheet)</i>
Weight	6.99 pounds (approx. 3.17 kg)

Note: For detailed and complete specifications, please refer to the official IFM EFECTOR OGD592 datasheet.

