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› [SICK UM30-213113 Ultrasonic Sensor User Manual](#)

Sick UM30-213113

SICK UM30-213113 Ultrasonic Sensor User Manual

Comprehensive instructions for installation, operation, and maintenance.

1. INTRODUCTION

This manual provides essential information for the safe and efficient use of the SICK UM30-213113 Ultrasonic Sensor. It covers installation, configuration, operation, maintenance, and troubleshooting. Please read this manual thoroughly before operating the device and keep it for future reference.

2. SAFETY INFORMATION

- **Qualified Personnel:** Installation, setup, and maintenance must only be performed by qualified personnel familiar with industrial electrical systems and safety regulations.
- **Power Disconnection:** Always disconnect power to the sensor and associated equipment before performing any installation, wiring, or maintenance tasks.
- **Environmental Conditions:** Ensure the sensor is operated within its specified environmental limits (temperature, humidity, etc.) to prevent damage and ensure reliable performance.
- **Wiring:** Follow all local and national electrical codes. Ensure correct wiring connections as described in this manual to prevent electrical hazards and sensor damage.
- **Mounting:** Securely mount the sensor to prevent accidental detachment or movement during operation.

3. PRODUCT OVERVIEW

The SICK UM30-213113 is a robust ultrasonic sensor designed for reliable non-contact detection and distance measurement in various industrial applications. Its cylindrical housing and blue end caps indicate its industrial-grade construction.



Figure 1: SICK UM30-213113 Ultrasonic Sensor. This image displays the cylindrical body of the sensor, featuring a metallic threaded housing and blue end caps. One end cap houses the ultrasonic transducer, while the other likely contains electrical connections and indicators.

4. SETUP

4.1 Mounting

1. Select a stable mounting location free from excessive vibration.
2. Ensure the sensor's sensing face has a clear line of sight to the target object, unobstructed by other equipment or surfaces.
3. Mount the sensor using appropriate brackets or by threading it into a compatible fixture. Ensure it is securely fastened.
4. Adjust the sensor's orientation to optimize detection range and accuracy for the specific application.

4.2 Electrical Connection

Refer to the sensor's wiring diagram (typically found on the sensor label or in a separate datasheet) for specific connection details. General steps include:

- Connect the power supply (e.g., 24V DC) to the designated terminals.
- Connect the output signal wires to the control system (PLC, relay, etc.).
- Ensure all connections are tight and insulated to prevent short circuits.

5. OPERATING INSTRUCTIONS

The SICK UM30-213113 operates by emitting ultrasonic sound waves and measuring the time it takes for the waves to reflect off a target object and return to the sensor. This time-of-flight principle allows for precise distance measurement or object detection.

- **Power On:** Apply power to the sensor. Observe any indicator LEDs for status (e.g., power on, output active).
- **Configuration (if applicable):** Some ultrasonic sensors allow for parameter adjustment (e.g., sensing range, output type, teach-in function) via buttons on the sensor or through a software interface. Refer to the specific product datasheet for configuration options.
- **Detection:** The sensor will continuously emit and receive ultrasonic waves. When a target object enters the sensing range, the output will change state according to its configuration.

6. MAINTENANCE

- **Cleaning:** Regularly clean the sensing face of the sensor to remove dust, dirt, or debris that could interfere with ultrasonic wave transmission and reception. Use a soft, damp cloth; avoid abrasive cleaners.
- **Inspection:** Periodically inspect the sensor and its cabling for any signs of physical damage, wear, or loose connections.
- **Environmental Check:** Ensure the operating environment remains within the sensor's specified limits.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Sensor not powering on	No power supply; incorrect wiring; faulty sensor.	Check power connections and voltage. Verify wiring against diagram. Replace sensor if faulty.
Inconsistent or no detection	Obstruction on sensing face; incorrect mounting/alignment; target too far/close; acoustic interference.	Clean sensing face. Adjust sensor position/angle. Verify target is within sensing range. Check for sources of acoustic noise.
Output always active/inactive	Incorrect configuration; sensor damage.	Review sensor configuration settings. Inspect for physical damage.

8. SPECIFICATIONS

Feature	Detail
Model Number	UM30-213113
Manufacturer	SICK
Package Dimensions	2.04 x 2.04 x 2.04 inches
Item Weight	1.73 Pounds
First Available Date	January 1, 2016

Note: For detailed electrical, performance, and environmental specifications, please refer to the official SICK UM30-213113 datasheet.

9. WARRANTY AND SUPPORT

For information regarding product warranty, technical support, or service, please contact SICK directly or your authorized

SICK distributor. Ensure you have your product model number (UM30-213113) and serial number available when seeking support.

Official SICK Website: www.sick.com

