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› Micro Measurement Sensor User Manual

Bolisila HL-G103-S-J

Bolisila Micro Measurement Sensor User Manual

Models: HL-G103-S-J, HL-G105-S-J, HL-G108-S-J, HL-G112-S-J, HL-G125-S-J, HL-G103-A-C5, HL-G105-A-C5, HL-G108-A-C5, HL-G112-A-C5, HL-G125-A-C5

1. INTRODUCTION

The Bolisila Micro Measurement Sensor is a compact and high-precision device designed for various industrial automation and intelligent production management applications. It offers a wide range of measurement distances with high accuracy, making it suitable for critical sensing tasks. This manual provides essential information for the proper setup, operation, and maintenance of your sensor.

2. SAFETY INFORMATION

Please read and understand all safety warnings before operating the sensor. Failure to comply with safety instructions may result in injury or damage to the equipment.

- **LASER RADIATION:** This product emits Class 2 laser radiation.
- **DO NOT STARE INTO BEAM:** Direct exposure to the laser beam can cause eye injury. Avoid staring directly into the laser aperture.
- **MAXIMUM OUTPUT:** 1mW
- **PULSE DURATION:** 2ms Max
- **MEDIUM:** Semiconductor Laser
- **WAVELENGTH:** 655nm
- **STANDARD COMPLIANCE:** Class 2 Laser Product IEC60825-1:2007
- **CAUTION:** Class 2 Laser Radiation when open. Do not stare into beam.
- Ensure proper grounding and electrical connections to prevent electric shock.
- Operate the sensor within its specified environmental conditions (temperature, humidity) to prevent malfunction.

3. PRODUCT OVERVIEW

The Bolisila Micro Measurement Sensor is a Programmable Logic Control (PLC) compatible device, designed for precise measurement. Its compact size allows for easy integration into various systems.



The image displays a compact micro measurement sensor, typically used in industrial automation. It features a digital display for readings, control buttons for navigation and selection, and a laser aperture. Warning labels regarding laser radiation are visible on the side.

Key Features:

- Type: Programmable Logic Control Product
- Compact in size and easy to install and calibrate.
- Offers a wide range of measurement distances with high precision.
- Suitable for industrial automation and intelligent production management.

4. SETUP

Follow these steps for proper installation and initial setup of your sensor:

1. **Mounting:** Securely mount the sensor in the desired location using appropriate fasteners. Ensure the mounting surface is stable and free from vibrations.
2. **Wiring:** Connect the sensor to your control system (e.g., PLC) according to the wiring diagram provided with your specific

model. Pay close attention to power supply, input, and output connections.

- 3. **Power Supply:** Connect the sensor to a stable power source within the specified voltage range. Verify correct polarity before applying power.
- 4. **Initial Power On:** Once wired, apply power to the sensor. Observe the digital display for initial readings or error codes.
- 5. **Calibration (if required):** Refer to your specific model's detailed calibration procedure. This typically involves setting zero points or reference distances using the onboard buttons (LASER, ALARM, OUT 1 2 3, ENTER, SELECT) and display.

5. OPERATING INSTRUCTIONS

Once installed and calibrated, the sensor is ready for operation. The digital display provides real-time measurement data, and the control buttons allow for mode selection and parameter adjustment.

- **Power On/Off:** The sensor powers on automatically when connected to a power source. Disconnect power to turn off.
- **Reading Display:** The primary digital display shows the current measurement value.
- **Mode Selection:** Use the 'SELECT' button to cycle through different operating modes or parameters.
- **Parameter Adjustment:** Use the 'ENTER' button in conjunction with other buttons (e.g., up/down arrows if present, or repeated presses of 'SELECT') to adjust settings such as measurement range, output thresholds, or alarm levels.
- **Alarm Output:** The 'ALARM OUT 1 2 3' indicators signify the status of programmable alarm outputs, indicating when measurements exceed or fall below set thresholds.
- **Laser Indicator:** The 'LASER' indicator confirms the laser emitter is active.

6. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your sensor.

- **Cleaning:** Periodically clean the sensor's optical surfaces (laser aperture, receiver lens) with a soft, lint-free cloth. Do not use abrasive cleaners or solvents.
- **Inspection:** Regularly inspect cables and connectors for signs of wear, damage, or loose connections.
- **Environmental Check:** Ensure the operating environment remains within the specified temperature and humidity ranges. Protect the sensor from excessive dust, moisture, and corrosive substances.
- **Recalibration:** Depending on the application and operating conditions, periodic recalibration may be necessary to maintain measurement accuracy.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

Problem	Possible Cause	Solution
Sensor not powering on	No power supply; Incorrect wiring; Faulty power supply	Check power connections; Verify wiring diagram; Test power supply voltage
Inaccurate readings	Dirty optical surfaces; Improper calibration; Environmental interference	Clean sensor lenses; Perform recalibration; Minimize environmental interference (e.g., strong light, vibrations)
No output signal	Incorrect output settings; Damaged output cable; Sensor malfunction	Verify output configuration; Check cable integrity; Contact support if issue persists
Display shows error code	Internal error; Sensor fault	Refer to specific model's error code list (if available); Power cycle the sensor; Contact technical support

8. SPECIFICATIONS

The following specifications apply to the Bolisila Micro Measurement Sensor series:

- **Item Model Number:** Bolisila
- **Manufacturer:** Bolisila
- **Country of Origin:** China
- **Package Dimensions:** 1.18 x 0.79 x 0.39 inches
- **Item Weight:** 14.11 ounces
- **ASIN:** B0D7SGNBJP
- **Date First Available:** June 22, 2024

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact your authorized Bolisila distributor or the seller directly. Keep your purchase receipt and product model number readily available when seeking support.

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