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› [KEYENCE LK-G5001 Laser Displacement Sensor Controller User Manual](#)

KEYENCE LK-G5001

KEYENCE LK-G5001 Laser Displacement Sensor Controller User Manual

Model: LK-G5001

INTRODUCTION

This manual provides essential information for the safe and effective operation of the KEYENCE LK-G5001 Laser Displacement Sensor Controller. Please read this manual thoroughly before using the product to ensure correct installation, setup, and maintenance. Retain this manual for future reference.

PRODUCT OVERVIEW

The KEYENCE LK-G5001 is a high-precision laser displacement sensor controller designed for accurate measurement and control in various industrial applications. It features multiple input/output ports for connectivity with sensors, external devices, and network systems.

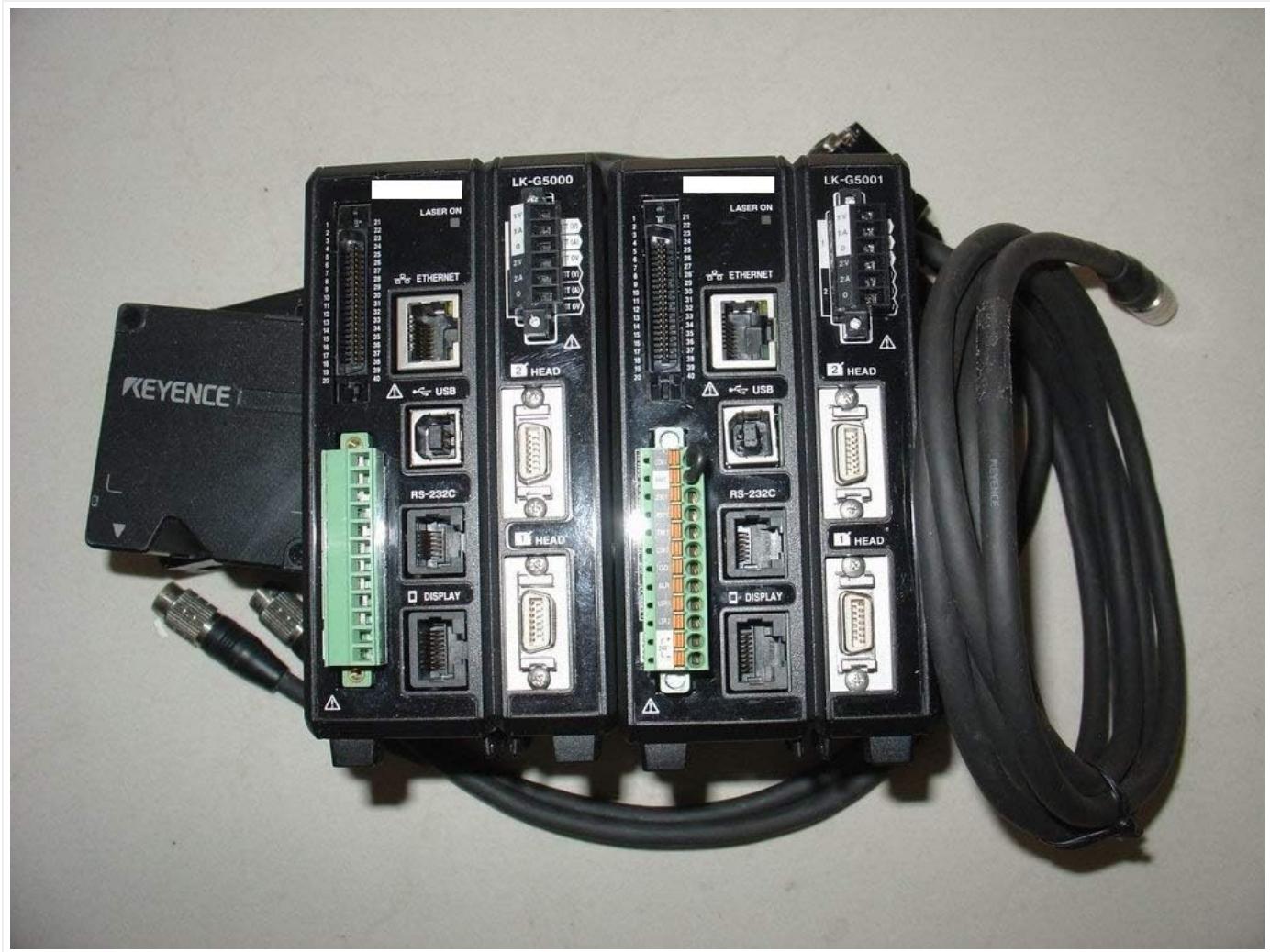


Figure 1: Overview of KEYENCE LK-G5001 and LK-G5000 series controllers. The image displays several black rectangular modules, including the LK-G5001, each with various ports and indicators. Visible ports include Ethernet, USB, RS-232C, Display, and multiple Head connections for laser sensors. Associated cables are also shown.

SAFETY PRECAUTIONS

- Always disconnect power before performing any installation or maintenance.
- Do not expose the unit to excessive moisture, dust, or extreme temperatures.
- Ensure proper grounding to prevent electrical shock.
- Use only specified cables and accessories.
- Do not attempt to disassemble or modify the unit. Refer all servicing to qualified personnel.

SETUP

1. Mounting

Mount the LK-G5001 controller securely in a stable environment, away from vibrations and direct heat sources. Ensure adequate ventilation around the unit.

2. Electrical Connections

1. Connect the power supply cable to the designated power input port.
2. Connect the laser sensor heads to the "HEAD" ports (1 HEAD, 2 HEAD) using the appropriate sensor cables.
3. For network communication, connect an Ethernet cable to the "ETHERNET" port.
4. For PC communication or data transfer, use the "USB" port.

5. The "RS-232C" port is available for serial communication with compatible devices.
6. Connect an external display to the "DISPLAY" port if required.

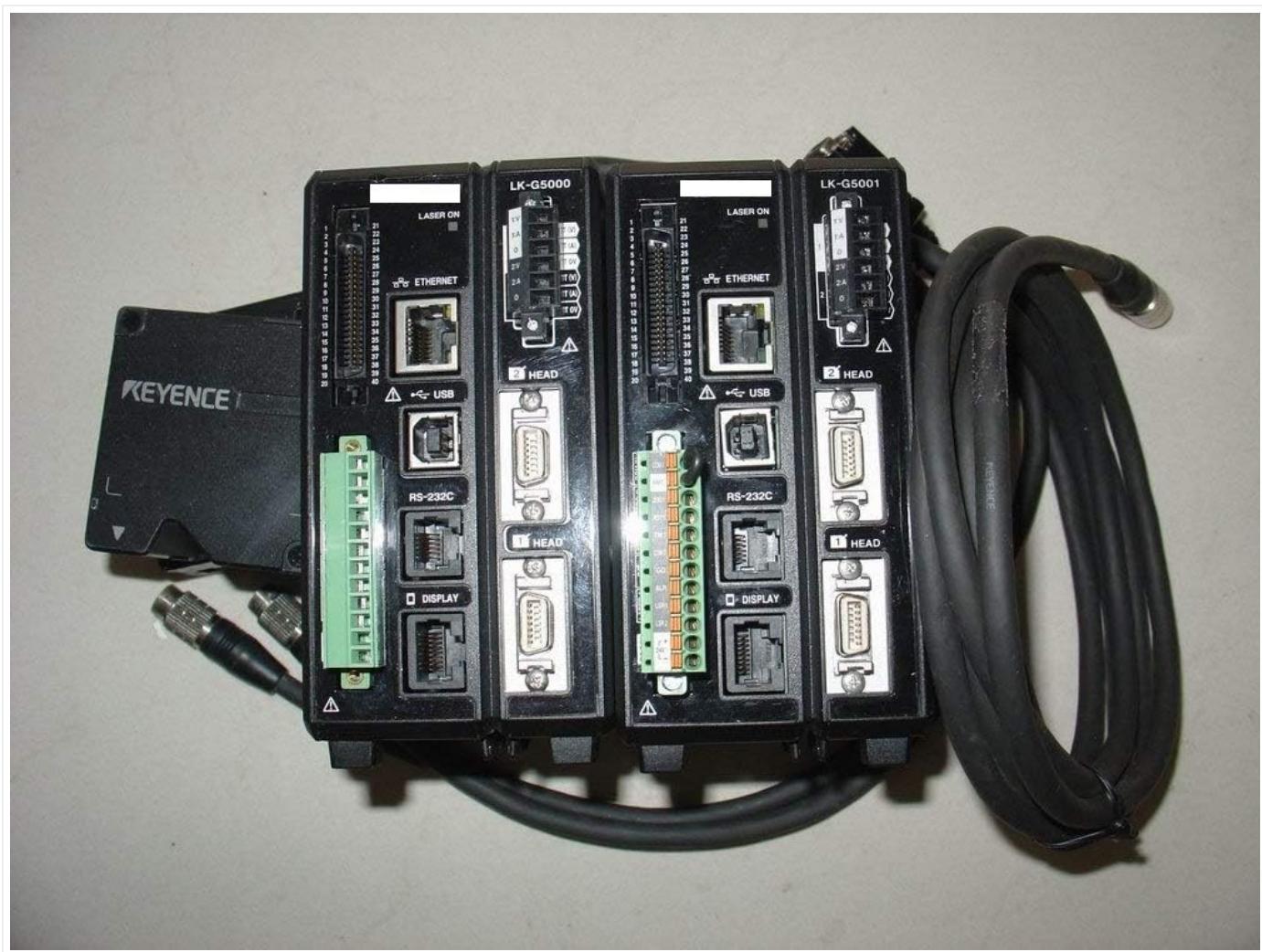


Figure 2: Detailed view of the LK-G5001 controller's connectivity ports. This image highlights the Ethernet, USB, RS-232C, Display, and Head ports, along with the "LASER ON" indicator and various pin connectors.

3. Initial Power-On

After all connections are made, apply power to the unit. Observe the "LASER ON" indicator. If it illuminates, the laser is active. Refer to the specific sensor head manual for laser safety information.

OPERATING

1. Basic Operation

The LK-G5001 operates in conjunction with compatible KEYENCE laser displacement sensor heads. Measurement data is processed by the controller and can be output via Ethernet, USB, or RS-232C. Configuration and monitoring are typically performed through dedicated software on a connected PC or via the display port.

2. Software Interface

For detailed parameter settings, calibration, and data acquisition, install the official KEYENCE LK-Navigator software (or equivalent) on your PC. Connect the controller via USB or Ethernet. The software provides a graphical user interface for comprehensive control.

3. Data Output

- **Ethernet:** High-speed data transfer for real-time monitoring and integration into industrial networks.

- **USB:** Convenient for direct PC connection and data logging.
- **RS-232C:** Standard serial communication for integration with legacy systems or specific devices.

MAINTENANCE

The LK-G5001 is designed for minimal maintenance. However, regular checks can ensure optimal performance and longevity.

- **Cleaning:** Periodically clean the exterior of the unit with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Cable Inspection:** Regularly inspect all connected cables for signs of wear, damage, or loose connections. Replace damaged cables immediately.
- **Firmware Updates:** Check the official KEYENCE website for any available firmware updates for the LK-G5001 to ensure the latest features and bug fixes.
- **Environmental Check:** Ensure the operating environment remains within specified temperature and humidity ranges.

TROUBLESHOOTING

This section provides solutions to common issues. For problems not listed here, contact technical support.

Problem	Possible Cause	Solution
No power/Unit not turning on	Power cable disconnected; Power supply failure; Unit fault	Check power cable connection; Verify power supply; Contact support if issue persists.
"LASER ON" indicator not lit	Sensor head not connected; Sensor head fault; Controller fault	Ensure sensor head is securely connected; Check sensor head for damage; Contact support.
No data output via Ethernet/USB	Cable disconnected; Incorrect software settings; Network configuration issue	Verify cable connections; Check software communication settings; Consult network administrator.

SPECIFICATIONS

The following table outlines the general specifications for the KEYENCE LK-G5001 controller. For detailed performance specifications, refer to the official product datasheet.

Feature	Description
Model	LK-G5001
Compatible Sensors	KEYENCE LK-G series laser displacement sensor heads
Communication Interfaces	Ethernet, USB, RS-232C
Display Output	Dedicated display port
Power Supply	(Specific voltage/current details typically found in full datasheet)
Operating Temperature	(Specific range details typically found in full datasheet)

WARRANTY INFORMATION

Specific warranty terms and conditions for the KEYENCE LK-G5001 are provided at the time of purchase or can be found on the official KEYENCE website. Please retain your proof of purchase for warranty claims. This product is typically covered by a limited manufacturer's warranty against defects in materials and workmanship.

SUPPORT AND CONTACT

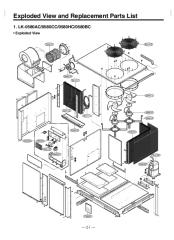
For technical assistance, troubleshooting beyond this manual, or inquiries regarding repairs and spare parts, please contact KEYENCE technical support. Visit the official KEYENCE website for regional contact information and online resources.

Official KEYENCE Website: www.keyence.com

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Related Documents - LK-G5001

	<p>Klipper Laser Displacement Sensors: Technical Overview and Specifications</p> <p>Explore Klipper's Laser Displacement Sensors, accessories for the Klipper Analyzer System. This document details features, specifications, and application guides for high-resolution and cost-effective sensor types.</p>
	<p>LG Air Conditioner Replacement Parts List and Exploded Views</p> <p>Comprehensive guide to replacement parts and exploded views for LG air conditioning units, including models LK-0580, LK-0880, LK-1080, LK-1580, and LK-2080 series. Find part numbers and specifications for cooling and heat pump systems.</p>
	<p>SEWOO Printer Product Guide Book</p> <p>A comprehensive guide to SEWOO's range of POS printers, label printers, mobile printers, and KIOSK printers, detailing their features, specifications, and applications across various industries.</p>
	<p>SEWOO Printer Product Guide: POS, Label, Mobile, and KIOSK Printers</p> <p>Discover SEWOO's complete range of printing solutions, including POS, Label, Mobile, and KIOSK printers. This guide details product features, applications, and specifications for various industries.</p>
	<p>Keyence IL Series CMOS Multi-Function Analog Laser Sensor Ultra-Long Type</p> <p>Discover the Keyence IL Series, a versatile CMOS multi-function analog laser displacement sensor offering ultra-long measurement ranges up to 3.5m, high precision, and robust performance for diverse industrial applications. Learn about its features, models, specifications, and applications.</p>



[KEYENCE IL Series: CMOS Multi-Function Analogue Laser Sensors - High-Performance Displacement Measurement](#)

Explore the KEYENCE IL Series of CMOS multi-function analogue laser sensors, offering stable detection, high performance, and versatile applications for industrial automation. Features include tuning-less operation, wide detection ranges, and advanced algorithms.

Documents - KEYENCE – LK-G5001

[\[pdf\] Datasheet](#)

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[pdf] User Manual Specifications Datasheet

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Data Sheet LKG5001 Controller English Manual SPECIFICATIONS Model LKG5001 Type Separate type Main controller Head compatibility Compatible Number of connectable sensors 2 Display Minimum display unit 0.001 m 0.0001 Mil Display range 999.999 m to 9999.99 mm 9.99999 Mil to 99.9999 7 s...

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NEW Ultra High-Speed/High-Accuracy Laser Displacement Sensor LK-G5000 Series TRANSPARENT/MIRROR TAR ... Binary output RS-232C interface USB interface Ethernet interface*4 Head expansion unit connector **LK-G5001V LK-G5001PV LK-G50 01/ LK-HD50 0 LK-G50 01P / LK-HD50 0 Main controller Compatible...**

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