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Data Sheet

August 13, 2026

KEYENCE

Keyence LS-5501 Built-In Display Type Controller

The Keyence LS-5501 is a built-in display type controller engineered for precision laser displacement measurement within the LS-5000 series. This unit integrates sensor parameter configuration, real-time measurement display, and tolerance-based quality control in a single chassis. The 7-level LCD tolerance check output provides immediate visual feedback on part conformance, while the dedicated green LED indicator at the scanning head confirms laser emission status. Timing, reset, and auto-zero inputs: Non-voltage (contact/solid-state) Output Interfaces Multi-level comparator output enables simultaneous monitoring across seven zones for product categorization and multi-stage quality gates Non-voltage input topology provides flexibility in timing synchronization across diverse production line architectures



MODEL

Keyence LS-5501

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

LS-5501

LISTING

<https://aumictechlabs.com/products/ls-5501-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keyence LS-5501 is a built-in display type controller engineered for precision laser displacement measurement within the LS-5000 series. This unit integrates sensor parameter configuration, real-time measurement display, and tolerance-based quality control in a single chassis. The 7-level LCD tolerance check output provides immediate visual feedback on part conformance, while the dedicated green LED indicator at the scanning head confirms laser emission status. Technical Specifications Display & Measurement Display range: -99.99995 to 999.99995 mm or -0.99999" to 9.99999" Minimum displayable unit: 0.05 μ m 7-level LCD

tolerance check indicator Input Interfaces Program selection input: Non-voltage (contact/solid-state) Laser stop/remote input: Non-voltage (contact/solid-state) Timing, reset, and auto-zero inputs: Non-voltage (contact/solid-state) Output Interfaces RS-232C: Measurement data and control output 7-level comparator output: 100 mA maximum at 40 V maximum Analog voltage output (optional I/O board): ± 10 V, 100 Ω impedance BCD output: Available as optional module Power & Environment Input voltage: 85 to 264 VAC, 50/60 Hz Power consumption: 85 VA maximum Ambient temperature: 0 to +40 °C (32 to 104 °F) Relative humidity: 35 to 85 % RH (non-condensing) Weight: Approximately 3.7 kg Key Features Multi-level comparator output enables simultaneous monitoring across seven zones for product categorization and multi-stage quality gates RS-232C communication for automated data logging and equipment integration Non-voltage input topology provides flexibility in timing synchronization across diverse production line architectures Optional analog and BCD outputs expand integration pathways for legacy and modern control systems Typical Applications Precision dimensional inspection, automated quality control, thickness measurement, surface profiling, and multi-zone product sorting in manufacturing environments. Compatibility & Integration Designed for use with Keyence LS-5041 sensor head and the LS-5000 series ecosystem. Optional I/O boards extend measurement and output capabilities. This model is discontinued; LS-9000 series optical micrometers are recommended as successors.

Features & description

From manufacturer datasheet

Built-in 320 × 240 backlit LCD

0.05 um minimum display 1200 scans per second laser scan 85-264 Vac; 85 VA or less RS-232C; optional analog plus/minus 10 V Technical Specifications Model: LS-5501 Manufacturer: Keyence Instrument Type: Laser scan micrometer controller Series: LS-5000 Alias: LS-5501; LS 5501 Display Type: built-in LCD 320 × 240 dots backlit Display Range: -99.99995 to 999.99995 mm Inch Range: -0.99999 to 9.99999 in Min Display Unit: 0.05 um Units: mm/inch selectable Comparator Display: 7-level LCD Laser Indicator: LCD (green LED on scanning head) Laser Scan Rate: 1200 scans per second Scan Velocity Class: 121 m/s (head-dependent) Scan Range Class: approx 46 mm (head-dependent) Program Select Input: non-voltage contact/solid state Laser Stop Input: non-voltage RS232: measurement data and control Analog Output Option: plus/minus 10 V, 100 ohm Comparator Output Option: 7-level 100 mA max 40 V Timing Reset Autozero: non-voltage inputs AC Power: 85 to 264 Vac 50/60 Hz Power Consumption: 85 VA or less Operating Temperature: 0 to 40 C Operating Humidity: 35 to 85 percent RH no condensation Weight: approx 3.7 kg Related Separate Display: LS-5001 I/O Board: optional (BCD on request) Modes: DIA, T.EDGE, B.EDGE, SEG(m,n)

LS5501 Characteristics / Specifications

PARAMETER	VALUE
Model	LS-5501
Manufacturer	Keyence
Instrument Type	Laser scan micrometer controller
Series	LS-5000
Alias	LS-5501; LS 5501
Display Type	built-in LCD 320 × 240 dots backlit
Display Range	-99.99995 to 999.99995 mm
Inch Range	-0.99999 to 9.99999 in
Min Display Unit	0.05 μ m
Units	mm/inch selectable
Comparator Display	7-level LCD
Laser Indicator	LCD (green LED on scanning head)
Laser Scan Rate	1200 scans per second
Scan Velocity Class	121 m/s (head-dependent)
Scan Range Class	approx 46 mm (head-dependent)
Program Select Input	non-voltage contact/solid state
Laser Stop Input	non-voltage
RS2	measurement data and control
Analog Output Option	plus/minus 10 V, 100 ohm
Comparator Output Option	7-level 100 mA max 40 V
Timing Reset Autozero	non-voltage inputs
AC Power	85 to 264 Vac 50/60 Hz
Power Consumption	85 VA or less
Operating Temperature	0 to 40 C
Operating Humidity	35 to 85 percent RH no condensation

PARAMETER	VALUE
Weight	approx 3.7 kg
Related Separate Display	LS-5001
I/O Board	optional (BCD on request)
Modes	DIA, T.EDGE, B.EDGE, SEG(m,n)
Successor	LS-9000 series
Form	controller with built-in display
Status	discontinued LS-5000 Notes Specs from Keyence LS-5501 / LS-5000 controller table (display range, 0.05 um, 1200 scans/s, 85-264 Vac, 85 VA, 3.7 kg). Confirm scanning-head model for accuracy and scan width. Do not invent head accuracy on the controller file.
Humidity	35 to 85 percent RH no condensation

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 to 40 C
Operating Temperature	0 to 40 C
Humidity	35 to 85 percent RH no condensation
Operating Humidity	35 to 85 percent RH no condensation
Weight	approx 3.7 kg
Related Separate Display	LS-5001
I/O Board	optional (BCD on request)
Modes	DIA, T.EDGE, B.EDGE, SEG(m,n)
Successor	LS-9000 series
Form	controller with built-in display
Status	discontinued LS-5000 Notes Specs from Keyence LS-5501 / LS-5000 controller table (display range, 0.05 um, 1200 scans/s, 85-264 Vac, 85 VA, 3.7 kg). Confirm scanning-head model for accuracy and scan width. Do not invent head accuracy on the controller file.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Model	LS-5501
Manufacturer	Keyence
Instrument Type	Laser scan micrometer controller
Specifications	
PARAMETER	VALUE
Series	LS-5000
Alias	LS-5501; LS 5501
Display Type	built-in LCD 320 x 240 dots backlit
Specifications	
PARAMETER	VALUE
Display Range	-99.99995 to 999.99995 mm
Inch Range	-0.99999 to 9.99999 in
Min Display Unit	0.05 um
Specifications	
PARAMETER	VALUE
Units	mm/inch selectable
Comparator Display	7-level LCD
Laser Indicator	LCD (green LED on scanning head)
Specifications	
PARAMETER	VALUE
Laser Scan Rate	1200 scans per second
Scan Velocity Class	121 m/s (head-dependent)
Scan Range Class	approx 46 mm (head-dependent)

Specifications

PARAMETER	VALUE
Program Select Input	non-voltage contact/solid state
Laser Stop Input	non-voltage
RS232	measurement data and control

Specifications

PARAMETER	VALUE
Analog Output Option	plus/minus 10 V, 100 ohm
Comparator Output Option	7-level 100 mA max 40 V
Timing Reset Autozero	non-voltage inputs

Specifications

PARAMETER	VALUE
AC Power	85 to 264 Vac 50/60 Hz
Power Consumption	85 VA or less
Operating Temperature	0 to 40 C

Specifications

PARAMETER	VALUE
Operating Humidity	35 to 85 percent RH no condensation
Weight	approx 3.7 kg
Related Separate Display	LS-5001

Specifications

PARAMETER	VALUE
I/O Board	optional (BCD on request)
Modes	DIA, T.EDGE, B.EDGE, SEG(m,n)
Successor	LS-9000 series

Form: controller with built-in display

Status: discontinued LS-5000

Notes

Specs from Keyence LS-5501 / LS-5000 controller table (display range, 0.05 um, 1200 scans/s, 85-264 Vac, 85 VA, 3.7 kg). Confirm scanning-head model for accuracy and scan width. Do not invent head accuracy on the controller file.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.