

**Aumictech**

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

KEYENCE

Keyence EX-V01 Controller for EX-305V Sensor Head

The Keyence EX-V01 is a controller unit designed for use with the EX-305V series sensor head. It processes signals from the sensor head to provide accurate and reliable detection in a variety of industrial automation applications. This controller offers high-speed response and easy setup.



MODEL

Keyence EX-V01

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

EX-V01

LISTING

<https://aumictechlabs.com/products/ex-v01-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keyence EX-V01 Controller is a dedicated amplifier unit that interfaces with the EX-305V inductive displacement sensor head to deliver high-speed, high-accuracy digital measurement for industrial automation. This controller processes analog sensor signals and provides multiple output formats - digital comparator outputs, strobe, alarm, and analog voltage - enabling integration into diverse control architectures. The EX-V01 achieves 0.075 ms response time at maximum speed with configurable 2-level threshold detection across four selectable patterns, supporting both NPN and PNP logic families. Technical Specifications Power Supply: 24 VDC $\pm 10\%$, maximum ripple 10% peak-to-peak, 240 mA current draw. Signal Processing: Maximum sampling rate of 40,000 samples per second (20,000 samples/sec with digital filter enabled). Response time 0.075 ms at full speed; OFF-delay time 60 ms. Sensor Head (EX-305V): 0 to 1 mm

measuring range with $\pm 0.3\%$ linearity (F.S.). Resolution: $0.4\text{ }\mu\text{m}$ at 64-point averaging. Display updates 20 times per second on 7-segment, 2-color LED. Temperature coefficient 0.07% F.S./ $^{\circ}\text{C}$ with iron targets (S45C, SS400, 1 mm thickness). Key Features Output Options: Digital outputs: HIGH, GO, LOW (NPN or PNP open-collector, 100 mA @ 40 V max for NPN; 100 mA @ 30 V max for PNP) Strobe output: Normally Open, 100 mA max, 1 V residual voltage maximum Alarm output: Normally Closed, 100 mA max, 1 V residual voltage maximum Analog output: $\pm 5\text{ V}$, $100\text{ }\Omega$ impedance, 0.075 ms response time Control Inputs: NPN open-collector or non-voltage contact; PNP accepts 10–30 V applied voltage. Supports timing, reset, auto-zero, comparator disable, synchronous, and external setting functions. Threshold Setting: Upper/lower 2-level configuration with four selectable comparison patterns. Typical Applications Precision displacement measurement in manufacturing metrology, quality control inspection, positioning feedback, and dimensional verification where sub-micron resolution and millisecond response times are required. Compatibility & Integration Designed exclusively for the Keyence EX-305V sensor head. Available in EX-V01 (NPN) and EX-V01P (PNP) variants to match existing plant control logic.

EXV01 Characteristics / Specifications

PARAMETER	VALUE
Model	EX-V01
Manufacturer	Keyence
Instrument Type	Inductive displacement amplifier NPN
Series	EX-V
Alias	EX-V01; EX V01
Output Logic	NPN
Related PNP	EX-V01P
Sensor Head	EX-305V
Head Shape	5.4 × 18 mm cylindrical
Measuring Range	0 to 1 mm (iron S45C/SS400 t=1 mm)
Display Range	-19999 to +19999
Linearity	plus/minus 0.3 percent of F.S.
Resolution	0.4 um (64 averages)
Sampling Rate	40000 per second max
Sampling With Filter	20000 per second
Display Speed	20 times per second
Display	7-segment 2-color LED
Over Range	plus/minus FFFF
Analog Output	plus/minus 5 V
Analog Impedance	100 ohm
Analog Response	0.075 ms at max speed
Control Outputs	NPN HIGH GO LOW 100 mA max 40 V
Response Time	0.075 ms at max speed
OFF Delay	60 ms
Strobe Output	NPN 100 mA 40 V, 1 V residual N.O.

PARAMETER	VALUE
Alarm Output	NPN 100 mA 40 V, 1 V residual N.C.
Judgment Memory	4 sets upper/lower 2-level
Measurement Modes	15 types
Power	24 Vdc plus/minus 10 percent, ripple 10 percent p-p max
Current Consumption	240 mA max
Temperature Characteristic	0.07 percent of F.S. per C (within 50 percent of range)
Ambient Temperature Amp	0 to 50 C (head -10 to +60 C on series table)
Humidity	35 to 85 percent no condensation
Vibration	10 to 55 Hz 1.5 mm 2 hXYZ Amplifier Weight: approx 235 g
Head Weight	approx 45 g including 3 m cable
Related EX V	0-2 mm with EX-110V
Form	DIN amplifier plus cylindrical head
Status	EX-V series Notes Specs from Keyence EX-V01 / EX-305V tables (0-1 mm, $\pm 0.3\%$ F.S., 0.4 μm , 40000/s, ± 5 V, 24 Vdc 240 mA). Confirm NPN versus EX-V01P and iron versus Al/Cu/SS linearity curves.

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	EX-V01
Manufacturer	Keyence
Instrument Type	Inductive displacement amplifier NPN
Specifications	
PARAMETER	VALUE
Series	EX-V
Alias	EX-V01; EX V01
Output Logic	NPN
Specifications	
PARAMETER	VALUE
Related PNP	EX-V01P
Sensor Head	EX-305V
Head Shape	5.4 x 18 mm cylindrical
Specifications	
PARAMETER	VALUE
Measuring Range	0 to 1 mm (iron S45C/SS400 t=1 mm)
Display Range	-19999 to +19999
Linearity	plus/minus 0.3 percent of F.S.
Specifications	
PARAMETER	VALUE
Resolution	0.4 um (64 averages)
Sampling Rate	40000 per second max
Sampling With Filter	20000 per second

Specifications

PARAMETER	VALUE
Display Speed	20 times per second
Display	7-segment 2-color LED
Over Range	plus/minus FFFF

Specifications

PARAMETER	VALUE
Analog Output	plus/minus 5 V
Analog Impedance	100 ohm
Analog Response	0.075 ms at max speed

Specifications

PARAMETER	VALUE
Control Outputs	NPN HIGH GO LOW 100 mA max 40 V
Response Time	0.075 ms at max speed
OFF Delay	60 ms

Specifications

PARAMETER	VALUE
Strobe Output	NPN 100 mA 40 V, 1 V residual N.O.
Alarm Output	NPN 100 mA 40 V, 1 V residual N.C.
Judgment Memory	4 sets upper/lower 2-level

Specifications

PARAMETER	VALUE
Measurement Modes	15 types
Power	24 Vdc plus/minus 10 percent, ripple 10 percent p-p max
Current Consumption	240 mA max

Specifications

PARAMETER	VALUE
Temperature Characteristic	0.07 percent of F.S. per C (within 50 percent of range)
Ambient Temperature Amp	0 to 50 C (head -10 to +60 C on series table)
Humidity	35 to 85 percent no condensation

Specifications

PARAMETER	VALUE
Vibration	10 to 55 Hz 1.5 mm 2 hXYZ Amplifier Weight: approx 235 g
Head Weight	approx 45 g including 3 m cable
Related EX V02	0-2 mm with EX-110V

Form: DIN amplifier plus cylindrical head

Status: EX-V series

Notes

Specs from Keyence EX-V01 / EX-305V tables (0-1 mm, $\pm 0.3\%$ F.S., 0.4 μm , 40000/s, $\pm 5\text{ V}$, 24 Vdc 240 mA).
Confirm NPN versus EX-V01P and iron versus Al/Cu/SS linearity curves.

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 13, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.