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Data Sheet

August 13, 2026

LABWORKS INC.

Labworks Inc. SC-121

Instrument Type: Two Channel Sine Servo Controller Series: SC Alias: SC-121; SC 121;
Labworks SC121 Frequency Range Low: 2 to 6553 Hz at 0.1 Hz (internal switch) Frequency
Range High: 4 to 10000 Hz at 0.2 Hz (internal switch) Acceleration Range: 0 to 99.9 g pk
Displacement Range: 0 to 2.50 in pk-pk or 0 to 50.0 mm pk-pk Input Channels: 2 Calibration
Sensitivity: 10 or 100 mV/g Variable Sensitivity: 10 or 100 mV/g plus/minus 20 percent Sweep
Modes: Manual, Continuous, or Single Sweep Sweep Rate: 0.5 to 8 octaves per minute
logarithmic Sweep Resolution: 0.5 octaves per minute Servo Dynamic Range: 70 dB min Servo
Speed: 3 ranges Variable Sine Output: 0 to 2.5 V rms at 50 ohms Constant Sine Output: 0.60 V
rms Normalized Accel Output: 10 mV/g at 50 ohms both channels Log Accel Data: 2 Vdc per
decade Linear Difference Data: 1.

**MODEL****Labworks Inc. SC-121****CALIBRATION****Available on request****CONDITION****Used****STATUS****In stock****RFQ / SKU****SC-121****LISTING**<https://aumictechlabs.com/products/sc-121-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Labworks Inc. SC-121 is a sine servo controller purpose-built for sinusoidal vibration testing. Its dual microprocessor architecture delivers immediate control response and dynamic range of 70 dB minimum, while crystal-controlled digital signal synthesis and filtering ensure precise frequency generation and output stability across demanding test environments. Technical Specifications Frequency Generation 2 to 6,553 Hz @ 0.1 Hz resolution (selectable via internal switch) 4 to 10,000 Hz @ 0.2 Hz resolution (selectable via internal switch) Vibration Feedback

Analysis Acceleration range: 0 to 99.9 g pk Displacement range: 0 to 2.50 in pk-pk or 0 to 50.0 mm pk-pk Input channels: 2 (independently selectable for control or feedback) Calibration inputs: 10 or 100 mV/g Variable inputs: 10 or 100 mV/g $\pm 20\%$ Output Specifications Variable output sine voltage: 0 to 2.5 V rms @ 50 ohms Constant output sine voltage: 0.60 V rms Normalized acceleration outputs: 10 mV/g @ 50 ohms (both channels) Sweep and Control Parameters Sweep type: Logarithmic Operating modes: Manual, Continuous, or Single Sweep Sweep rate: 0.5 to 8 octaves/min @ 0.5 octaves/min resolution Servo speed: 3 ranges (microprocessor optimized and frequency dependent) Data Outputs Acceleration log control: 2 Vdc/decade Linear difference: 1.0 Vdc ± 0.01 Vdc/% difference Frequency log: 2 Vdc/decade Sweep/pen lift logic: TTL, low during sweep Power and Environment Input: 110 ± 15 Vac or 220 ± 30 Vac, 48–62 Hz Operating temperature: 40 to 100 °F Dimensions: 3.5" H $\times$ 19" W $\times$ 12" D (19-inch rack mount) Key Features Dual microprocessor design for optimized servo response Selectable one or two-channel acceleration feedback for multi-accelerometer configurations Difference output enabling transfer function determination and calibration verification Internal non-volatile memory supporting up to three independent 1, 2, 3, or 4-level test profiles Intuitive operator interface minimizing setup complexity Typical Applications Large head shaker and slip plate vibration control via multi-channel signal averaging Sinusoidal sweep testing with programmable test profiles Transfer function and fixture calibration characterization Compatibility & Integration The SC-121 accepts dual accelerometer inputs with configurable feedback channels, allowing integration into complex shaker test systems where multiple measurement points require simultaneous monitoring or signal combination.

SC121 Characteristics / Specifications

PARAMETER	VALUE
Model	SC-121
Manufacturer	Labworks Inc.
Instrument Type	Two Channel Sine Servo Controller
Series	SC
Alias	SC-121; SC 121; Labworks SC121
Frequency Range Low	2 to 6553 Hz at 0.1 Hz (internal switch)
Frequency Range High	4 to 10000 Hz at 0.2 Hz (internal switch)
Acceleration Range	0 to 99.9 g pk
Displacement Range	0 to 2.50 in pk-pk or 0 to 50.0 mm pk-pk
Input Channels	2
Calibration Sensitivity	10 or 100 mV/g
Variable Sensitivity	10 or 100 mV/g plus/minus 20 percent
Sweep Modes	Manual, Continuous, or Single Sweep
Sweep Rate	0.5 to 8 octaves per minute logarithmic
Sweep Resolution	0.5 octaves per minute
Servo Dynamic Range	70 dB min
Servo Speed	3 ranges
Variable Sine Output	0 to 2.5 V rms at 50 ohms
Constant Sine Output	0.60 V rms
Normalized Accel Output	10 mV/g at 50 ohms both channels
Log Accel Data	2 Vdc per decade
Linear Difference Data	1.0 Vdc plus/minus 0.01 Vdc per percent difference
Log Frequency Data	2 Vdc per decade
Sweep Pen Lift	TTL, low during sweep
Stored Profiles	up to 3 independent 1, 2, 3, or 4 level tests

PARAMETER	VALUE
Meters	four independent parameter meters
AC Power	110 plus/minus 15 Vac or 220 plus/minus 30 Vac
Power Frequency	48 to 62 Hz
Operating Temperature	40 to 100 degF Height: 3.5 in
Width	19 in
Depth	12 in
Form	19 in rack mount 2U class
Related Manual	SG-135 manual sine controller
Related Digital	VL-144 / VL-145 VibeLab controllers Notes Specs from Labworks SC-121 product page (frequency, g, displacement, sweep, servo, outputs, 3.5 × 19 × 12 in, 110/220 Vac). Confirm 2-6553 Hz versus 4-10000 Hz internal switch and accelerometer mV/g.

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	40 to 100 degF Height: 3.5 in
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Width	19 in
Depth	12 in
Form	19 in rack mount 2U class
Related Manual	SG-135 manual sine controller
Related Digital	VL-144 / VL-145 VibeLab controllers Notes Specs from Labworks SC-121 product page (frequency, g, displacement, sweep, servo, outputs, 3.5 × 19 × 12 in, 110/220 Vac). Confirm 2-6553 Hz versus 4-10000 Hz internal switch and accelerometer mV/g.

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	
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Series	SC
Alias	SC-121; SC 121; Labworks SC121
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PARAMETER	VALUE
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Acceleration Range	0 to 99.9 g pk
Displacement Range	0 to 2.50 in pk-pk or 0 to 50.0 mm pk-pk
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PARAMETER	VALUE
Input Channels	2
Calibration Sensitivity	10 or 100 mV/g
Variable Sensitivity	10 or 100 mV/g plus/minus 20 percent
Specifications	
PARAMETER	VALUE
Sweep Modes	Manual, Continuous, or Single Sweep
Sweep Rate	0.5 to 8 octaves per minute logarithmic
Sweep Resolution	0.5 octaves per minute

Specifications

PARAMETER	VALUE
Servo Dynamic Range	70 dB min
Servo Speed	3 ranges
Variable Sine Output	0 to 2.5 V rms at 50 ohms

Specifications

PARAMETER	VALUE
Constant Sine Output	0.60 V rms
Normalized Accel Output	10 mV/g at 50 ohms both channels
Log Accel Data	2 Vdc per decade

Specifications

PARAMETER	VALUE
Linear Difference Data	1.0 Vdc plus/minus 0.01 Vdc per percent difference
Log Frequency Data	2 Vdc per decade
Sweep Pen Lift	TTL, low during sweep

Specifications

PARAMETER	VALUE
Stored Profiles	up to 3 independent 1, 2, 3, or 4 level tests
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AC Power	110 plus/minus 15 Vac or 220 plus/minus 30 Vac

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Specifications

PARAMETER	VALUE
Depth	12 in
Form	19 in rack mount 2U class
Related Manual	SG-135 manual sine controller

Related Digital: VL-144 / VL-145 VibeLab controllers

Notes

Specs from Labworks SC-121 product page (frequency, g, displacement, sweep, servo, outputs, 3.5 x 19 x 12 in, 110/220 Vac). Confirm 2-6553 Hz versus 4-10000 Hz internal switch and accelerometer mV/g.

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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<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
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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.