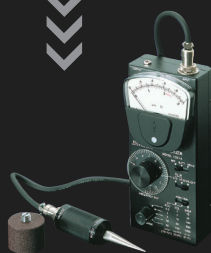


Revised edition



VIBRATION measuring Instruments

General Catalog



SHOWA SOKKI

DIGI-VIBRO

MODEL-1332B

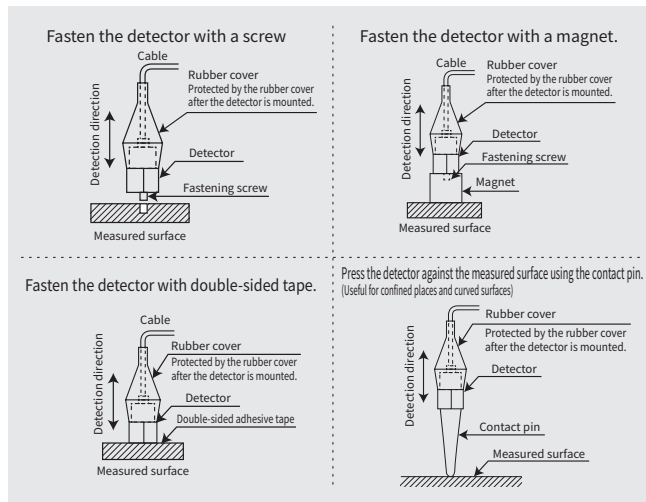
- Enables practical and speedy vibration measurement with simple operation.
- Compliant with JIS B 0907, the standard for vibration severity measurement instruments.
- Usable for a wide range of applications, including daily inspection of equipment and devices, product development design, and product shipment inspections.
- The set includes the detector, magnet, and everything needed for measurement. Comes with inspection certificate.



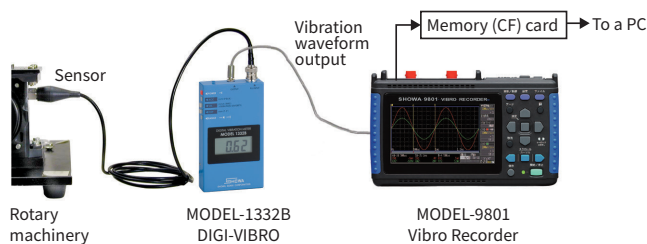
Compact and light digital display vibrometers

Vibration detection method

DIGI-VIBRO can measure vibration by just pressing the detector against the subject, but the magnet and contact pin accessories enable various other measurement methods.



Connection to a recorder or PC



Vibration severity

JIS B 0906 (ISO 10816-1)

Rms value of vibration velocity (mm/s)	Class 1	Class2	Class 3	Class 4
0.71mm/s	A	A	A	A: Excellent B: Good C: Usable D: Not usable
1.12 mm/s	B	1.12 mm/s		A
1.8mm/s	1.8 mm/s	B	1.8 mm/s	
2.8 mm/s	C	2.8 mm/s	B	2.8 mm/s
4.5 mm/s	4.5 mm/s	C	4.5 mm/s	B
7.1 mm/s		7.1 mm/s	C	7.1 mm/s
11.2 mm/s	D		11.2 mm/s	C
18 mm/s		D	D	18mm/s

Machine group

Class 1	Engines and machinery built in as components in an overall configuration (general-purpose electric motors up to 15kW)
Class 2	Medium-sized machines without special footings (motors of 15-75kW), and engines and machines installed on robust footings (up to 300kW).
Class 3	Large motors or large rotary machinery installed on rigid footings.
Class 4	Large prime movers or large rotary machinery installed on footings of relatively low stiffness (turbo generator sets and gas turbines etc. with output of 10MW or more)

Specifications

Acceleration measurement range	Hi(Peak) 0.1 to 199.9m/s ² /Lo(Peak) 0.01 to 19.99m/s ²
Velocity measurement range	Hi(RMS) 0.1 to 199.9mm/s/Lo(RMS) 0.01 to 19.99mm/s
Displacement measurement range	Hi(P-P) 0.01 to 19.99mm/Lo(P-P) 0.001 to 1.999mm
Frequency range	Acceleration 5 to 5,000Hz(±1dB), 5 to 10,000Hz(±3dB) Velocity 10 to 1,000 Hz(Complies with the JIS B 0907) Displacement 10 to 1,000Hz(±1dB)
Measurement precision	Acceleration ±3%, ±1 digit 80Hz, 1/2FS 23±5°C Velocity ±5%, ±1 digit Displacement ±5%, ±1 digit
Temperature range	Detector part: -20 to 110°C, body: -10 to 50°C
AC output	±2V (full scale)
Power supply	LR6 (AA) alkaline batteries x2, at least 30 hours continuous operation
Dimensions and weight (body)	75(W)×130(H)×24(D) mm, approx. 200g
Content of standard configuration	MODEL-1332B body, MODEL-2304A piezoelectric acceleration detector, LNC-3F-1.5 low-noise cable, LC-90 contact pin, MG-1 magnet, alkaline batteries, carrying case, inspection certificate

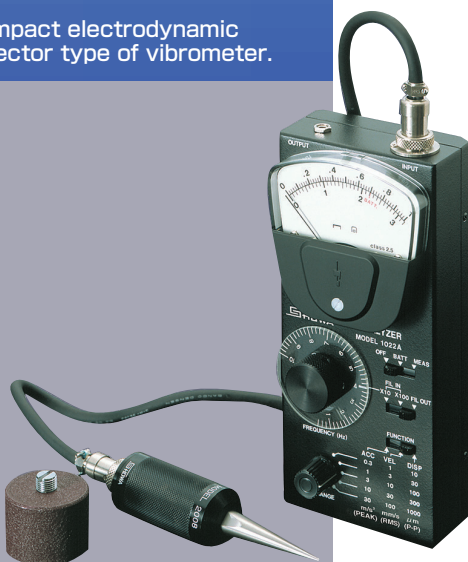
Optional type specifications

Model	High-input type MODEL-1332B-01H	High-sensitivity type MODEL-1332B-01L	Lightweight sensor type MODEL-1332B-00F
Measurement range	0.1 to 1999m/s ² (Peak) 0.1 to 1999mm/s(RMS) 0.001 to 19.99mm(P-P)	0.001 to 19.99m/s ² (Peak) 0.001 to 19.99mm/s(RMS) 0.1 to 1999μm(P-P)	* Detectors are the 1.3g lightweight type. Measurement range is the same as the standard configuration.

Mini Vibro

MODEL-1022A

- Because this is an analog meter, it gives stable readout of intensely variable vibrations, with low oscillation.
- With a built-in frequency analysis filter, it can read vibration components of rotation speed only.
- Compliant with JIS B 0907, the standard for vibration severity measurement instruments.
- This is a compact electrodynamic velocity detector type of vibrometer.



High-function compact analog vibrometer

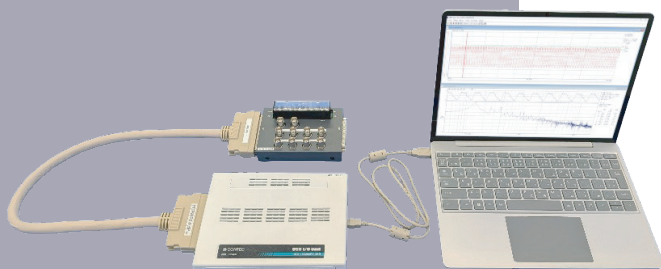
Specifications

Acceleration measurement range	0.3, 1, 3, 10, 30 mm/s ² (Peak)/ full scale
Velocity measurement range	1, 3, 10, 30, 100 mm/s (RMS)/ full scale
Displacement measurement range	10, 30, 100, 300, 1000 μm (P-P)/ full scale
Frequency range	10 to 1000 Hz
Analysis frequencies	10 to 1000 Hz Q=10
AC output	±1 V/ full scale
Accuracy	3% (80 Hz sine wave, 100 μm (P-P))
Temperature range in use	0°C to +50°C
Power supply (dry batteries)	9 V battery x1, at least 24 hours of continuous operation
Dimensions and weight	Body (W)85×(H)190×(D)55 mm, 750 g Detector (H)72×(Dia)30 mm, 140 g Contact pin (L)55 mm, 20 g
Standard configuration	Body 1022A, MODEL-2008 electrodynamic velocity detector CA2411-1 detector cable CA1311-1 output cable Portable aluminum case, 9 V battery
Options	MG-2 magnet

VIBRO-View

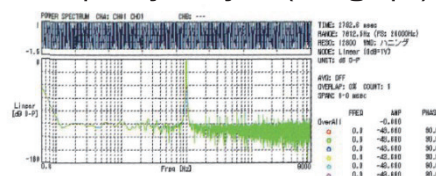
MODEL-9900

- Acquires and analyzes waveforms for up to 32 channels.
- TY, FFT, and XY graph analysis.
- Ideal for multichannel vibration waveform recording and FFT analysis.



Vibration waveform analysis software

Frequency analysis (FFT graph)



Specifications

Number of input channels	32 channels
Input range	±10 V
Maximum sampling rate	160 kHz (with 1 to 3 channels)
A/D resolution	16-bit
Trigger	Manual, one-shot, repeat, interval
Recording length	Depends on available HDD space
FFT	Spectrum, transfer function
Graph	TY, FFT, XY
File format	Binary, CSV
Window	Rectangular, Hanning, flat-top, Hamming
Calculation	RMS, average, peak, area calculation
Waveform processing	Filters (FIR, Butterworth), downsampling
Interface	USB
Configuration	① 8-channel input set MODEL-9900-T03 VIBRO-View MODEL-9900 8-channel terminal block MODEL-9900-21 Cable MODEL-9900-12 A/D converter MODEL-9900-02 ② 32-channel input set MODEL-9900-T04 VIBRO-View MODEL-9900 32-channel terminal block MODEL-9900-22 Cable MODEL-9900-12 A/D converter MODEL-9900-02

Vibro Converter

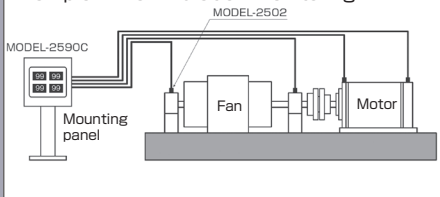
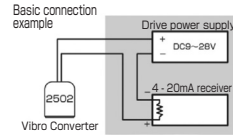
MODEL-2502

- Choose between the acceleration type, velocity type, and displacement type.
- Convenient 4-20 mA output type. Usable with long-distance wiring.
- For vibration monitoring for pumps, blowers, and all other kinds of rotary machinery.

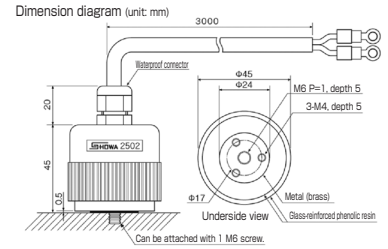
**Applications**

- For simple, low-cost vibration monitoring systems
- For building into rotary devices such as motors, pumps, and blowers
- As a vibration detector for automatic testing systems
- As a simple dedicated vibrometer
- For equipment diagnostics in machine tools and chemical and manufacturing plants
- For other vibration measurement and monitoring

Example 1: Fan vibration monitoring

**Delivering simple, low-cost vibration monitoring**

Our 2590C digital monitor includes this portion, as well as an alarm circuit.

**Specifications**

Measurement mode	Acceleration	Velocity	Displacement	Displacement
Model	2502-01	2502-02	2502-03	2502-03H
Full scale range	100m/s ² Peak	50mm/sRMS	200 μm(P-P)	2mm(P-P)
Frequency range	5 to 1,000Hz	10 to 1,000Hz	10 to 500Hz	10 to 500Hz

Measurement range	1 - 110% of full scale
Output	DC4-20mA/0- full scale
Linearity	Within 1% of full scale
Accuracy	Within 5% (80Hz, 1/2 full scale, 20°C)
Drive power supply	DC9 to 28V
Temperature range	-20 to 80°C
Protection rating	IP64
Vibration resistance	Vibration 200m/s ² , shock 1,000m/s ²
Insulation resistance	100M Ω DC500V (terminal to casing)
Withstand voltage	AC1,500V, 1 minute (terminal to casing)
Output cable	3m, direct from unit, crimp terminals at end
External dimensions and weight	φ 45×45(H)mm, 105g (not including cables)
Material	Glass-reinforced phenolic resin
Mounting	M6 screws
Options	Extension cable CA02743-XXm MG-6 magnet for mounting

Digital monitor

MODEL-2590C

- A digital monitor which displays signals of 4-20mA with a scaling display.
- Incorporates an alarm circuit with 2 upper limit values, AL1 and AL2, and a delay timer.
- Combines with MODEL-2502 to configure a simple, low-cost vibration monitoring system.

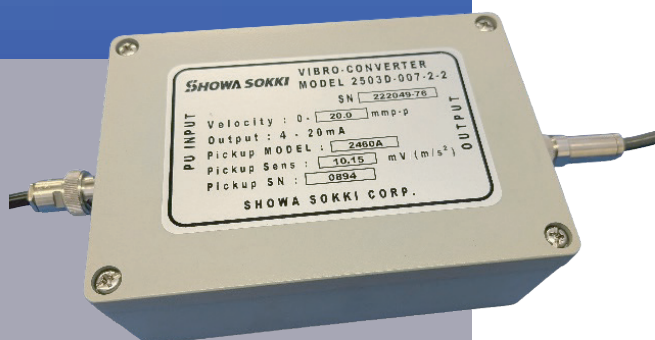
**Digital display monitor with alarm function****Specifications**

Input signal	4-20mA
Analog output	4-20mA
Input resistance	10 Ω
Display	Settable to between 0 and the desired full scale value
Display unit	5-digit 7-segment red LED display
Display cycle	Settable to 0.1-5s, default is 1s
Power supply for driving external devices	DC24V, 100mA Max.
Alarm settings	The two upper limit values, AL1 and AL2, can be set to any level. Automatic reset or self-hold possible. Delay setting: Settable to 0.1-99.9s, default is 5s
Alarm relay	Each 1C contact, rated AC250V 5A, DC30V 5A Max.
Panel face protective structure	IP65 (when used with rubber seals)
Operating temperature and humidity	-10 to 50°C 25% to 85% RH (no condensation)
Dimensions and weight	96(W)×48(H)×92(D)mm approx. 300g
Power supply	AC85 to 264V 50/60Hz 10VA Max.
Options	① Analog output change Output types: 4-20mA, 0 - 5V, 1 - 5V, 0 - 10V ② DC24V power supply type

Vibro-converter

MODEL-2503

- Converts signals from various vibration detectors into a 4-20 mA output.
- Ideal for vibration monitoring requiring waterproof, explosion-proof, low-frequency, or other specialized detectors.
- Detector, range, mode, frequency, and other parameters can be specified.

*4-20 mA converter for vibration detectors***Specifications**

Compatible detectors	Acceleration detector with built-in amplifier Charge-output acceleration detector Servo accelerometer Electrodynamic velocity detector Non-contact displacement detector
Output	4-20 mA DC / 0-FS ±2 V AC/FS
Power supply	24 V DC, 50 mA max.
Temperature	-10 to 50°C
Measurement mode	Selectable from acceleration (A), velocity (V), and displacement (D)
Full scale	Acceleration: 20 to 200 m/s ² Velocity: 20 to 200 mm/s Displacement: 0.2 to 2.0 mm (P-P) Other values also available
Frequency range	Acceleration: 5 Hz to 8 kHz Velocity: 10 Hz to 1 kHz Displacement: 10 Hz to 500 Hz Other values also available
Filter	Built-in filters optimized for each mode; custom values can also be specified (optional)

Reference configuration example

Acceleration detector with built-in amplifier	MODEL-2470
Detector cable	CA2854-5m
Vibro-converter	MODEL-2503
Converter cable	CA4172-5m

Model code table2503 - - - (Example: 2503V-003-1-1)

Measurement mode		Sensor type		Measurement range				High-pass filter		Low-pass filter	
Code		No.		No.	m/s ²	mm/s	mmP-P	No.	Hz	No.	Hz
A	Acceleration	0	0 Built-in amplifier type	1	20	20	0.2	1	A: 5 and higher V: 10 and higher D: 10 and higher	1	A: Up to 8,000 V: Up to 1,000 D: Up to 500
V	Velocity	0	1 Servo	2	30	30	0.3	2	Optional setting	2	Optional setting
D	Displacement	0	3 Charge output	3	40	40	0.4				
		1	1 Electrodynamic	4	50	50	0.5				
		2	0 Non-contact (dynamic)	5	100	100	1.0				
		2	1 Non-contact (static)	6	200	200	2.0				
				7	Other	Other	Other				

Sensor amplifier for PLC

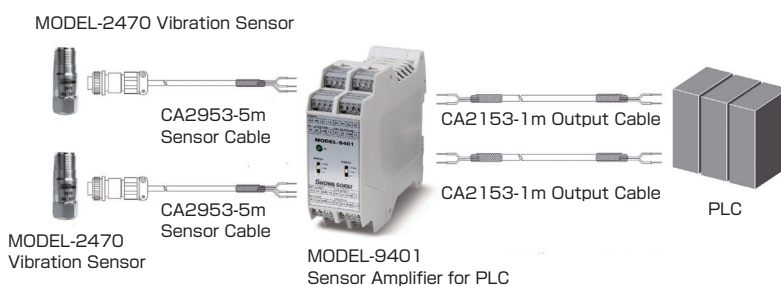
MODEL-9401

- Connectable to high-speed input units from major PLC manufacturers.
- Broadly applicable to diverse applications and environments.
- A vibration measurement system which combines low cost with high precision.

*Ideal for vibration monitoring and analysis by PLC*

■ Basic system configuration example

This product can be combined with various vibration sensors to suit diverse applications and environments, and provides real-time high-precision waveform information, ideal for monitoring and analysis by PLC etc.



■ Specifications

Input Specifications	
No. of input channels	2 channels
Input terminals	Terminal block (3.8mm pitch)
Compatible detectors	Built-in preamplifier type
Output specifications (AC out)	
No. of output channels	2 channels
Output terminals	Terminal block (3.8mm pitch)
Output signal	Maximum output $\pm 10V$
Frequency response	1Hz to 20kHz($\pm 1.0dB$) 0.5Hz to 20kHz(+1.0dB, -3.0dB)
Accuracy	$\pm 2\%$ (23°C $\pm 5^\circ C$, 1 kHz/1 V (peak) input, Range x10)
General specification	
Power supply	DC18 to 36V
Temperature and humidity ranges	-10 to +60°C, 90%RH max (no condensation)
Weight	210g (not including sensors and cables)
Optional specification	
With DC output, 2CH	MODEL-9401-04 DC output (maximum 7.07V)
2CH (frequency changing type)	MODEL-9401-06 Frequency response 1Hz to 10kHz

Each model can also be made with 1 channel. Please contact us for details.

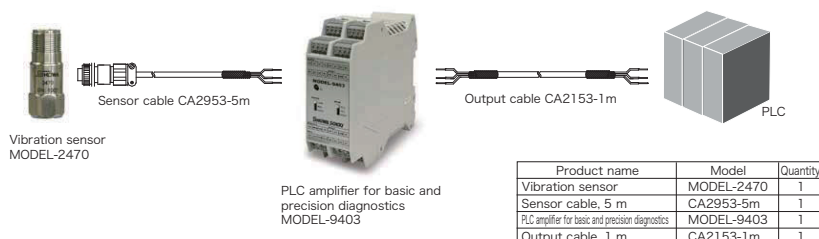
■ 2CH system configuration

Product name	Model (Q'ty.)
Vibration sensor	MODEL-2470 (2)
Sensor cable, 5m	CA2953-5m (2)
Sensor amplifier for PLC	MODEL-9401-02 (1)
Output cable, 1m	CA2153-1m (2)

PLC amplifier for basic and precision diagnostics

MODEL-9403

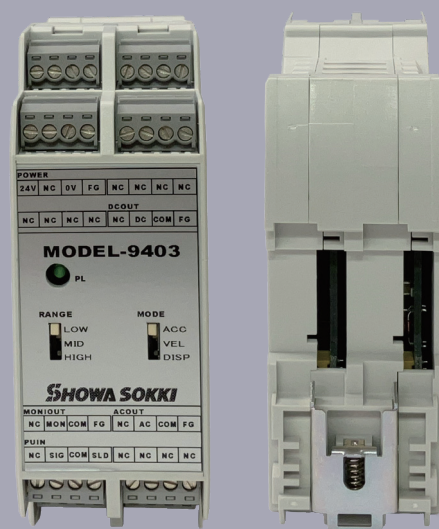
- Measurement mode switching (acceleration/velocity/displacement) supports a wide variety of vibration measurements.
- Three selectable ranges (LOW/MID/HIGH).
- Provides two outputs: AC OUT (raw waveform) and DC OUT (level output).

Three measurement modes support both basic and precision diagnostics

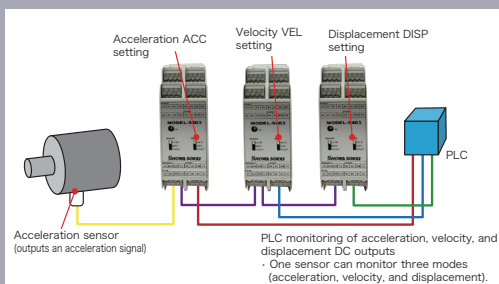
MODEL-9403 Specifications

Input specifications		
Input terminal	Terminal block (3.8 mm pitch)	
Sensor excitation power supply	24 V DC (typ.), 4 mA	
Compatible sensor	Built-in preamplifier type	
Measurement modes and ranges		
Measurement mode	Measurement range (F.S.)	
Acceleration	LOW	0 to 2 [m/s²] Peak
	MID	0 to 20 [m/s²] Peak
	HIGH	0 to 200 [m/s²] Peak
Velocity	LOW	0 to 2 [mm/s] RMS
	MID	0 to 20 [mm/s] RMS
	HIGH	0 to 200 [mm/s] RMS
Displacement	LOW	0 to 0.2 [mm] P-P
	MID	0 to 2 [mm] P-P
	HIGH	0 to 20 [mm] P-P
Measurement modes and frequency characteristics		
Measurement mode	Frequency characteristics	
Acceleration	5 Hz to 5 kHz (±1 dB), 5 Hz to 10 kHz (±3 dB)	
Velocity	10 Hz to 1 kHz (equivalent to the 1332B velocity mode) (Note 1)	
Displacement	10 Hz to 1 kHz (±1 dB)	
	(Note 1) The upper frequency limit must not exceed the maximum frequency of the connected acceleration sensor.	
Output specifications (AC OUT)		
Output terminal	Terminal block (3.8 mm pitch)	
Output signal	±2 V/F.S.	
Accuracy	±2% (at 23°C ± 5°C, F.S. input in each mode, frequency: 80 Hz)	
AC noise	10 mV RMS max.	
Output impedance	Approx. 50 Ω	
Load resistance	10 kΩ min.	
Output specifications (DC OUT)		
Output terminal	Terminal block (3.8 mm pitch)	
Detection method	True RMS (true root mean square conversion)	
Output signal	+2 V DC/F.S.	
DC offset	10 mV DC max.	
Accuracy	±5% (at 23°C ± 5°C, F.S. input in each mode, frequency: 80 Hz)	
Output impedance	Approx. 50 Ω	
Load resistance	10 kΩ min.	
General specifications		
Power supply	24 V DC (typ.) (voltage range: 18 to 36 V DC)	
Current consumption	100 mA max. (At a supply voltage of 24 V DC, 23°C ± 5°C, LOW range, F.S. input, frequency: 80 Hz)	
Operating temperature and humidity range	-10 to +60°C, 93% RH max. (no condensation)	
Mass	Approx. 195 g (excluding sensor and cables)	

* When a 100.0 mV sensor is connected



Includes a through-output function (outputs the signal unchanged), enabling one sensor to monitor acceleration, velocity, and displacement in all three modes.



Triaxial micro vibration detector

MODEL-2205B

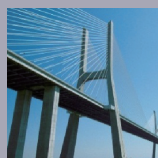
- Measures triaxial micro vibrations with high precision, with a built-in triaxial servo-type detector.
- Measurement mode can be switched to acceleration, velocity, and displacement.
- Ideal for measurement of microtremors in structures, and for floor vibration measurement in semiconductor factories.



■ Usage examples



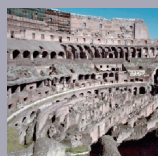
Installation floor vibration measurement for precision machining tools
Floor vibration measurement in precision machining factories where small vibrations can affect equipment.



Bridge vibration measurement
Bridge vibration measurement to analyze bridge vibration characteristics.

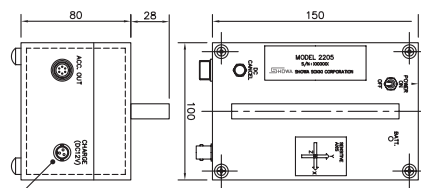


Seismic resistance of school buildings
The seismic resistance of school buildings can be studied using microtremor measurement data for each floor.



Survey of ruins
Microtremor measurement to analyze the vibration characteristics of ruins and other structures.

Triaxial vibrometer for measurement of low-frequency micro vibration



Charger connector
(Also serves to charge the internal battery)

■ Specifications

Detector	Triaxial servo-type accelerometer, resolution: Not exceeding 1 μG
Output sensitivity	Acceleration: 5V/10m/s ² Velocity: 5V/10mm/s Displacement: 5V/100 μm
Output terminals	RO1 type 6 pin connector
Frequency range	DC acceleration: DC-100Hz ($\pm 10\%$) AC acceleration: 0.1-100Hz ($\pm 10\%$) Velocity: 1-100Hz ($\pm 10\%$) Displacement: 1-100Hz ($\pm 10\%$)
Low-pass filter	200Hz
Accuracy	$\pm 3\%$ (16Hz, 5m/s ² , room temperature)
Noise	DC acceleration: 0.001m/s ² or less. AC acceleration/ velocity/ displacement: 2 μG or less. (When using internal battery)
Shock resistance	1,000m/s ² , 5ms
DC cancel function	Simultaneously cancel all three axes to zero with the DC cancel button.
Temperature range	-10 to 60°C
Power supply	Rechargeable sealed lead battery, usable for at least 5 hours continuously.
Battery alarm	Green LED goes out when battery level is low.
Dimensions and weight	See the external diagram, approx. 2kg
Options	MODEL-2205-80 Charger MODEL-2205-81 AC Adapter MODEL-2205-91 Output Cable (RO1 at body end, BNC×3 at output end)

Vibration monitor unit

MODEL-2205-12

- This monitor unit is used in combination with our MODEL-2205B.
- It has an amplification function to enable measurement with even higher sensitivity.
- Vibration values can be checked with the analog meter.



Handy monitor unit for MODEL-2205B

■ Specifications

Compatible detectors	MODEL-2205B
Full scale range (AC $\pm 1\text{V}$)	Acceleration: 0.1/0.316/1/3.16/10 m/s ² (Peak) Velocity: 0.1/0.316/1/3.16/10mm/s (Peak) Displacement: 1/3.16/10/31.6/100 μm (P-P)
Output terminals	BNC
Power supply	6F22(9V) cells ×2, at least 40 hours continuous operation with alkaline type
Dimensions and weight	96(W) ×155(H) ×48(D)mm, approx. 700g
Standard configuration	MODEL-2205-12 Monitor unit CA6811-1.5 Monitor cable

Elevator vibration measurement system

MODEL-6601

- Complies with the ISO 18738-1 standard for elevator ride quality evaluation.
- For vibration measurement during new elevator installation or modernization.
- For periodic elevator inspections.
- Equipped with a 3.5-inch color LCD for viewing vibration waveforms on the unit.

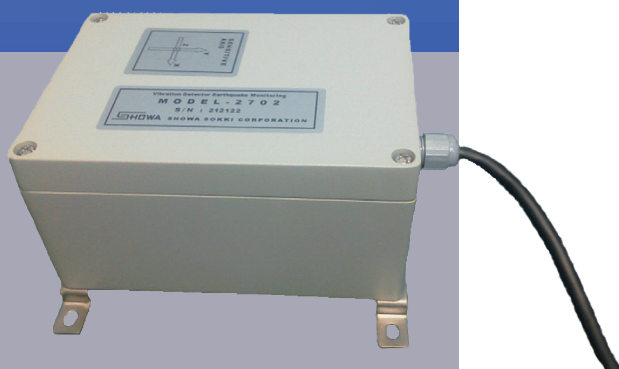
*Vibration detector for elevator diagnostics and maintenance***■ Specifications**

Display	3.5-inch color LCD
Detector	3-axis acceleration detector, DC to 640 Hz (-3 dB)
Sampling frequency	Selectable from 250 Hz, 500 Hz, 1,000 Hz, and 2,000 Hz
Frequency range	Selectable from DC to 80 Hz, DC to 160 Hz, DC to 320 Hz, and DC to 640 Hz
Resolution	0.005 m/s ² (0.5 Gal)
Maximum recording time	10 minutes
Recording method	USB flash drive
Power supply	12 V lithium-ion battery (approx. 10 hours of continuous operation)
Dimensions and mass	275 (D) × 300 (W) × 110 (H) mm, 3 kg
Software	Supports ISO diagnostic reports and includes FFT and other analysis functions
Option	Calibration documentation

Vibration detector for earthquake monitoring

MODEL-2702

- Outputs the vector-summed vibration acceleration in the X, Y, and Z directions as a 4-20 mA DC signal.
- Outputs seismic motion from 0 to 400 Gal.
- Selectable real-time or peak-hold output

*For equipment shutdown and evacuation during earthquakes***■ Specifications**

Detector	3-axis acceleration sensor; Sensitivity: 300 mV/(9.8 m/s ²)
Measurement range	0 to 400 Gal
Frequency range	0.25 to 2 Hz
Filter	HPF: 0.25 Hz (-3 dB ± 0.5 dB) LPF: 2 Hz (-3 dB ± 0.5 dB) Attenuation: -6 dB/octave
Output mode	Real-time output: Outputs the detected vibration value in real time. Peak-hold output: Outputs the peak value within the specified period. (Selectable from 1 to 10 seconds)
Output	4-20 mA DC / 0-400 Gal
Power supply	24 V DC, 1 A max.
Operating temperature and humidity range	0 to 70°C, 45 to 85% RH, no condensation
Construction	Die-cast aluminum, IP65
Dimensions and mass	100 (W) × 140 (D) × 80 (H) mm, approx. 1 kg (main unit)
Cable	Standard: Integral 5 m cable (optional specifications available), crimp terminals
Option	Digital monitor MODEL-2590C-A11

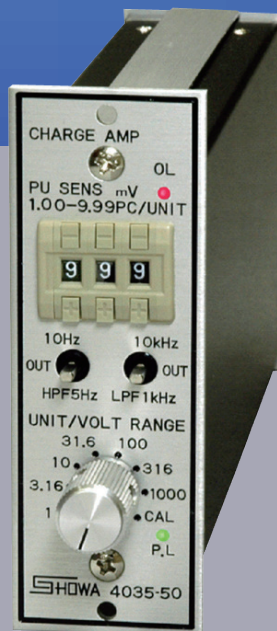
■ Application examples

- For safe shutdown of plant equipment during earthquakes
- For establishing evacuation criteria during earthquakes
- For emergency shutoff of water, sewer, and gas lines
- For low-cost, simple earthquake monitoring

Charge amplifier

MODEL-4035-50

- Dynamic range is at least 100dB.
- Ideal for high-precision measurement.
- Supports charge output type and built-in amplifier type sensors.



Usable as single channel with an AC adapter, or with multiple channels with a power supply unit.

Configuration

Single channel configuration example
 Charge amplifier: MODEL-4035-50 x1 unit
 AC adapter: MODEL-4035-91 x1 unit

Four-channel configuration example
 Charge amplifier: MODEL-4035-50 x4 units
 Power supply unit: MODEL-4035-10M x1 unit
 4 channel housing case: MODEL-4035-21 x1 unit

General-purpose charge amplifier**Specifications**

Standard configuration	MODEL-4035-50
Input terminals	Insulated BNC connector
Compatible detectors	Charge output type and built-in amplifier type detectors
Constant current drive power supply	+24V, 3mA rated current (when using a built-in amplifier type detector).
Frequency response	0.5Hz to 100kHz...+1, -3dB 1Hz to 50kHz...±1dB 5Hz to 20kHz...±0.5dB
Full scale sensitivity	1V/1pC(mV) to 10,000pC(mV)
Sensor sensitivity	Measurement range 0.100 to 0.999pC(mV) 10, 30, 100, 300, 1,000, 3,000, 10,000 UNIT/V 1.00 to 9.99pC(mV) 1, 3, 10, 30, 100, 300, 1,000 UNIT/V* 10.0 to 99.9pC(mV) 0.1, 0.3, 1, 3, 10, 30, 100 UNIT/V 100 to 999pC(mV) 0.01, 0.03, 0.1, 0.3, 1, 3, 10 UNIT/V
Output	AC output (BNC connector) Maximum output voltage ± 10V (± 1V/FS) Note: Maximum is ±3.16V with 300 range, and ±1V with 1,000 range DC output (DSUB connector) Maximum output voltage + 10V (+ 1V/FS) Note: Maximum is +3.16V with 300 range, and +1V with 1,000 range
Noise level (typ.)	Full band: ① The input value converted from [0.008pCrms+ 0.005pCrms per 1,000pF of input capacitance], or ② 5mV (RMS), whichever is larger. Narrow band: 0.5Hz, 100pC/V → 10μV/√Hz 20 - 1,000Hz, 100pC/V → 1μV Full band (mV): ① The input value converted from 10μV rms, or ② 5mV rms, whichever is larger.
Accuracy	Within 1.5% over all ranges when not exceeding 1,000Hz and input capacitance 1,000pF
Filter	LPF: 1,000Hz, 10,000Hz(-12dB/OCT) HPF: 3Hz, 10Hz(-12dB/OCT)
Temperature and humidity ranges	-20°C to +60°C, Not exceeding 90%RH, no condensation
Power supply	DC±9V - ±15V, or AC100 - 240V from an AC adapter The power supply unit can be used when built into a multichannel housing case. Power supply unit: MODEL-4035-10M (AC100V, can drive up to 10 channels)
Dimensions and weight	34.5(W)×99(H)×152(D)mm, approx. 350g

Optional types

High-sensitivity type	MODEL-4035-51
Full scale sensitivity	1V/0.1pC(mV) to 1,000pC(mV)
Sensor sensitivity	Measurement range 0.100 to 0.999pC(mV) 1, 3, 10, 30, 100, 300, 1,000 UNIT/V* 1.00 to 9.99pC(mV) 0.1, 0.3, 1, 3, 10, 30, 100 UNIT/V 10.0 to 99.9pC(mV) 0.01, 0.03, 0.1, 0.3, 1, 3, 10 UNIT/V
High-input type	MODEL-4035-52
Full scale sensitivity	1V/10pC(mV) to 100,000pC(mV)
Sensor sensitivity	Measurement range 10.0 to 99.9pC(mV) 1, 3, 10, 30, 100, 300, 1,000 UNIT/V* 1.00 to 9.99pC(mV) 10, 30, 100, 300, 1,000, 3,000, 10,000 UNIT/V 0.100 to 0.999pC(mV) 100, 300, 1,000, 3,000, 10,000, 30,000, 100,000 UNIT/V
Other options	MODEL-4035-91 AC adapter MODEL-4035-10M power supply unit MODEL-4001-20 3CH housing case MODEL-4035-21 4CH housing case MODEL-4035-23 10CH housing case MODEL-4035-30 blank panel The AC adapter is only for single channel drive. Use a power supply unit and a housing case for multiple channels.

The panel face shows the display range. Other ranges are used with conversion.

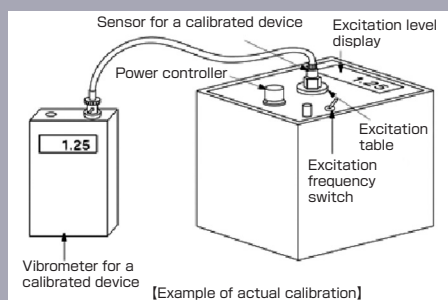
	General-purpose	Compact and lightweight		Shock	Built-in amplifier type			
								
Model	2304A	2302B	2353B	2351A	2470	2473L	2460A	2462
Features	Top connector, general-purpose, low cost	Compact, lightweight, high sensitivity, bending type	Ultra-compact, ring shear type	Ultra-compact, shear type for shock measurement	For vibration monitoring Low cost	Low frequency Wind turbine measurement	3-axis, cubic shear type	3-axis, cubic shear type
Sensitivity	5 pC/m/s ² (50 pC/G)	1.84 pC/m/s ² (18.4 pC/G)	0.2 pC/m/s ² (2 pC/G)	0.035 pC/m/s ² (0.35 pC/G)	10 mV/m/s ² (100 mV/G)	50 mV/m/s ² (500 mV/G)	10 mV/m/s ² (100 mV/G)	1 mV/m/s ² (10 mV/G)
Capacitance (pF)	850	1,900	1,200	590	—	—	—	—
Resonant frequency (kHz)	35	5	60	60	30	15	35	55
Frequency range Hz (±1 dB)	1 to 8,000	1 to 1,300	1 to 10,000	1 to 20,000 (±3 dB)	0.7 to 9,000	0.2 to 2,300 (±3 dB)	1 to 5,000	0.5 to 15,000 (±3 dB)
Maximum acceleration (m/s ²)	16,000	5,000	5,000	100,000	800	100	400	5,000
Shock limit (m/s ²)	20,000	10,000	10,000	100,000	50,000	50,000	30,000	30,000
Operating temperature range (°C)	-40 to 150	-20 to 120	-50 to 160	-50 to 160	-50 to 120	-50 to 120	-50 to 110	-50 to 80 (120)
Dimensions (mm)	Hex 14 × 25.5	13 × 4 × 4	φ8 × 5	φ3.5 × 2.5	Hex 17 × 46	φ25.4 × 61.5	14.2 × 14.2 × 14.2	10 × 10 × 10
Mass	25	1.3	1.9	0.2	62	142	11.1	4.4
Case material	Stainless steel	Stainless steel	Stainless steel	Titanium	Stainless steel	Stainless steel	Titanium	Titanium
Connector	10-32	Integral 3 m cable with 10-32 plug	M3	Integral 3 m cable with 10-32 plug	MIL-C-5015	MIL-C-5015	DR-4S-4	CZ663
Mounting method	M6 screw	Adhesive	M2 bolt	Adhesive	M6 adapter screw included	M6 adapter screw included	M5 screw	M3 screw
Cable	Cable sold separately	Integral 3 m cable	Includes LNC-6D-3m	Integral 3 m cable	Cable sold separately	Cable sold separately	3 m cable sold separately	3 m cable sold separately

Portable Vibration Calibrator

MODEL-8100

Designed for easy calibration of sensors and vibrometers

- Applies excitation in acceleration and displacement modes.
- Adjustable excitation level.
- Ideal for checking sensitivity after long-term use and before measurements, etc.



■ Specifications

Excitation force	Maximum 9.8N
Maximum amplitude	5mm(P-P)
Acceleration range	0 to 199.9m/s ² (Peak)
Displacement range	0 to 1.999mm(P-P)
Accuracy	Within 3% (80Hz, 10m/s ² , 25°C)
Excitation frequencies	80Hz, 500Hz switchable Signal inputs from external function generators etc. can also be used. (5Hz to 5kHz)
Excitation table	φ25mm, holes tapped for M6 P=1 screws
Output	AC±2V/ full scale
Temperature range	10°C to 40°C
Power supply	100V AC ±10%, 50/60 Hz, Max 1A
Dimensions and weight	116 (W) × 199 (H) × 199 (D) mm, approx. 4.2kg
Options	Excitation table φ25mm, holes tapped for M5 screws Excitation table φ25mm, holes tapped for 10-32UNF screws

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Dealerships

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