

**world first**

**ACO's**

smaller than a cellular phone

# Compact size Vibration meter

Watch, Listen, Measure, Like a noted Doctor of Industrial Machinery !



3 mode measurements,  
Acceleration, Velocity, Displacement

ACO's Compact size  
Portable Vibration meter

**TYPE 3116 /  
3116A**



smaller than a cellular phone **Compact size**  
**ACO's Vibration meter**



3 mode measurements, Acceleration, Velocity, Displacement

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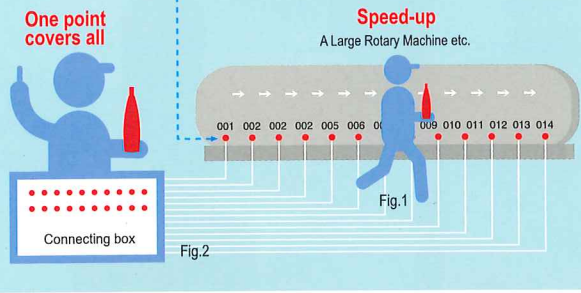
Vibration Meter "ACO VIBRO TYPE3116" is super mini-size like a cellular phone. It offers, just like a "machinery doctor", high precision monitoring of various industrial machinery by using the optional headphone or auscultation stick. It offers a simple way of making medical chart for your machine. The "data hold" function has highly promoted the easy observation of the numerical data. In addition, maintenance or examination of the existing machine, or experiment for a new facility under development, has been greatly promoted by fixing and numbering the measuring points on a large-scale target machinery, or by improving the mobility of the measurement based on the "single point" scheme stated above.

**Incidence Surveillance Monitor**  
 Maintenance of facilities is much simplified by fixing the plural measuring points.

ACO Vibro TYPE 3116 shows power particularly in a periodic inspection or anomaly monitoring of facilities, both made with measuring points fixed. By attaching the sensor to the target machinery through the connecting box, it is possible to monitor or print out its condition whenever needed. The result is printed out in turn that they were stored in the memory, which then greatly promotes the collation with object machinery.

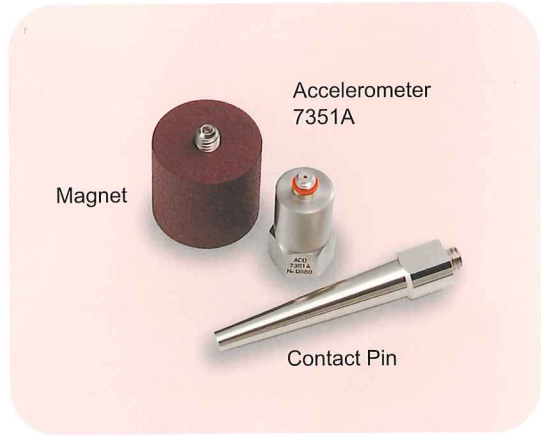
Vibration Level

001/013	00:01:01, 00:00	•
002/013	00:01:01, 00:00	•
003/013	00:01:01, 00:00	•
004/013	00:01:01, 00:00	•
005/013	00:01:01, 00:00	•
006/013	00:01:01, 00:00	•
007/013	00:01:01, 00:00	•
008/013	00:01:01, 00:00	•
009/013	00:01:01, 00:00	•
010/013	00:01:01, 00:00	•
011/013	00:01:01, 00:00	•
012/013	00:01:01, 00:00	•
013/013	00:01:01, 00:00	•



**Features**

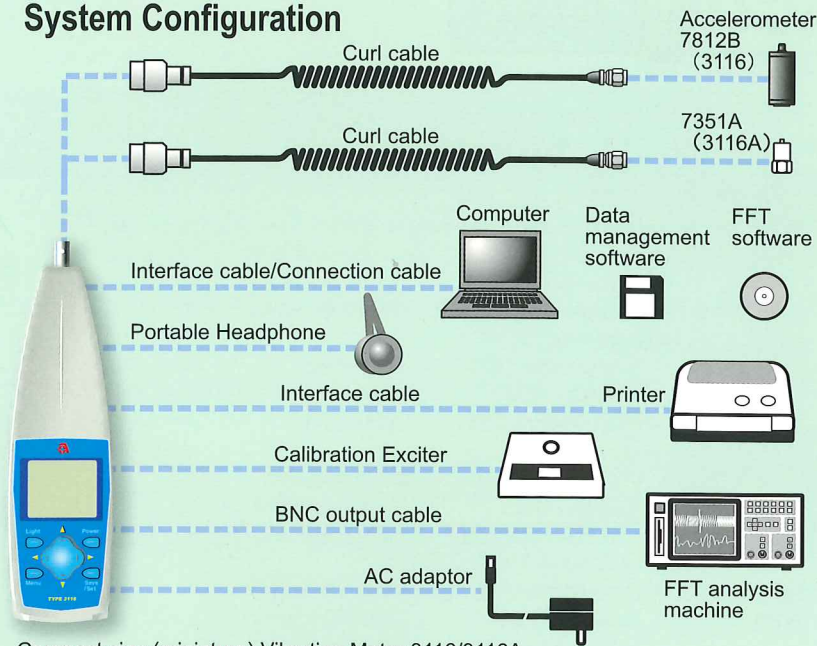
- Vibration can be actually heard with your own ear, aiming at the pinpoint spot in question. This is the time of the maintenance of facilities, by watching, hearing and measuring the vibration.
- Compact design, light weight i.e., approx.130g (Including batteries), that demonstrates power on the site of the measurement.
- Single hand operation is possible just like a cellular phone.
- Built in Memory for max.256 data.
- Built-in serial interface, enabling rapid data processing on your PC.
- Restart the measurement with the last condition set up and stored just before the power-off.
- The output to an exclusive printer is possible.
- Energy-saving design allows continuous measurement longer than 12 hours straight with only 2 Alkaline Cells type LR03.



**Accelerometer Specification**

	<b>3116 / 7812B</b>	<b>3116A / 7351A</b>
Main body	Voltage input	Charge input
Sensor	Voltage output type (built-in pre-amplifier)	Charge output type
TYPE	7812B	7351A
Sensitivity	5.0mV/m/s <sup>2</sup> (49.1mV/G) ±3% at 100Hz	5.0pC/m/s <sup>2</sup> (49.1pC/G) ±3% at 100Hz
Transverse Sensitivity	5% or less	5% or less
Frequency characteristics	1Hz~8kHz	1Hz~10kHz
Constant-current power supply	DC7V 0.5~4mA	_____
Temperature range	-10~+60°C	-10~+110°C (Curl Cable) -10~+150°C (The cable for high temperature)
Size and Weight	24Φ × 50 Approx.60g	13.8Φ × 25 Approx.32g

## System Configuration



Compact size (miniature) Vibration Meter 3116/3116A

### Option

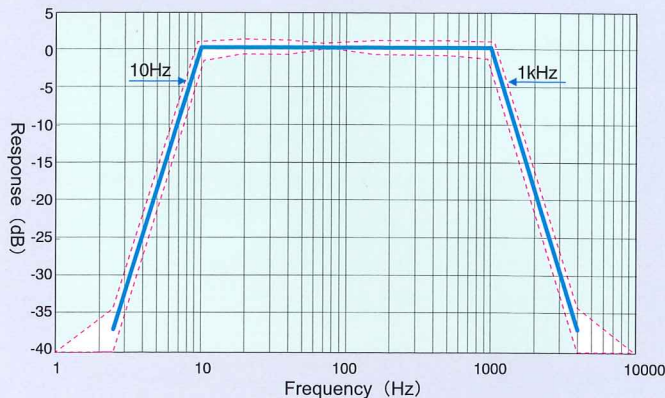
- AC adaptor AC-1046
- Stethoscope (300mm) NA-0134
- BNC output cable BC-0071
- Interface cable (With conversion adaptor) BC-0026
- Printer (a roll of paper included) BS-80TSL
- Data management software NA-0116
- Portable Headphone ATH-FC5 BK (by Audio-technica)
- A plug adapter for headphone PC-260MS (by SONY)
- A high density type Magnet PV-5050
- Stud SS-22M

### Structure

- 1) Compact size (miniature) Vibration Meter TYPE 3116 1
- 2) Accelerometer TYPE 7812B 1
- 3) Curl cable 1
- 4) Magnet 1
- 5) Contact Pin 1
- 6) Alkaline Cells type LR03 2
- 7) Carrying case 1
- 8) Operation Manual 1

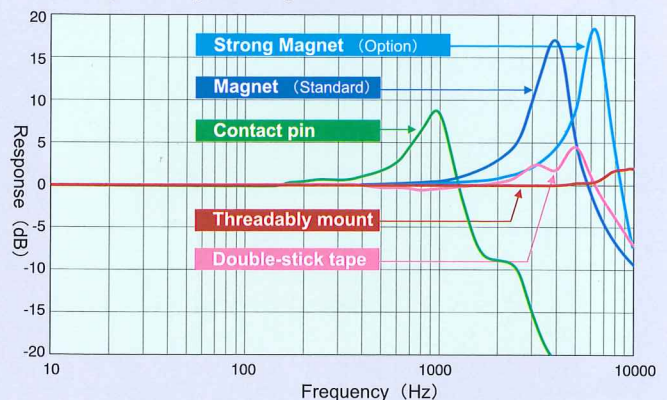


## Velocity(VEL) Frequency Response



※The range 10-1kHz shown with a dotted line satisfies JIS B0907~1989, Severity for Rotating Machinery

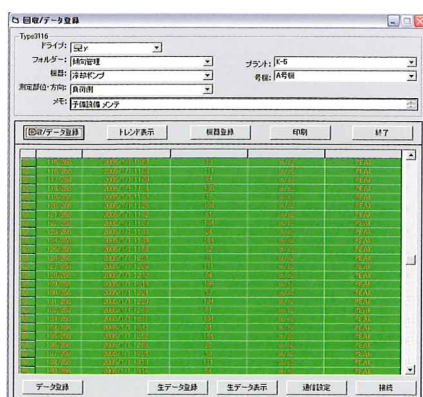
## Frequency Response



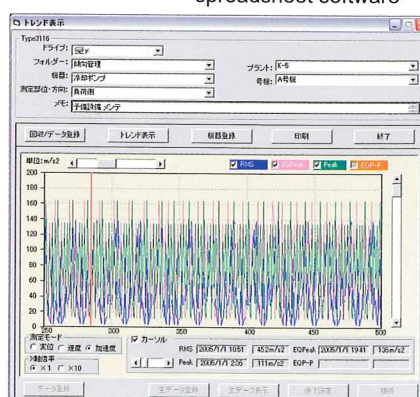
## Option Data management software NA-0116

It is possible to manage the data on your PC by using the data handling software.

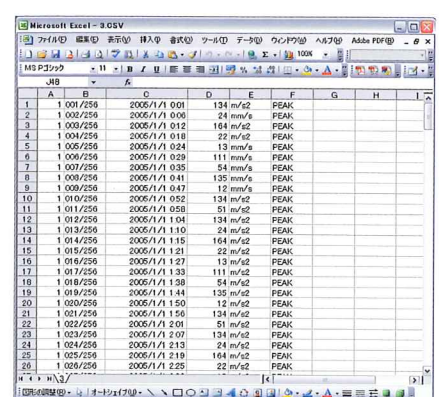
- Operating system software: Microsoft Windows 98/Me/2000/XP
- Data sampling and vibration data display for Vibration meter TYPE 3116 through serial data communication
- The data is stored in CSV form, corresponding to data processing of spreadsheet software



An example of list display of an oscillation value

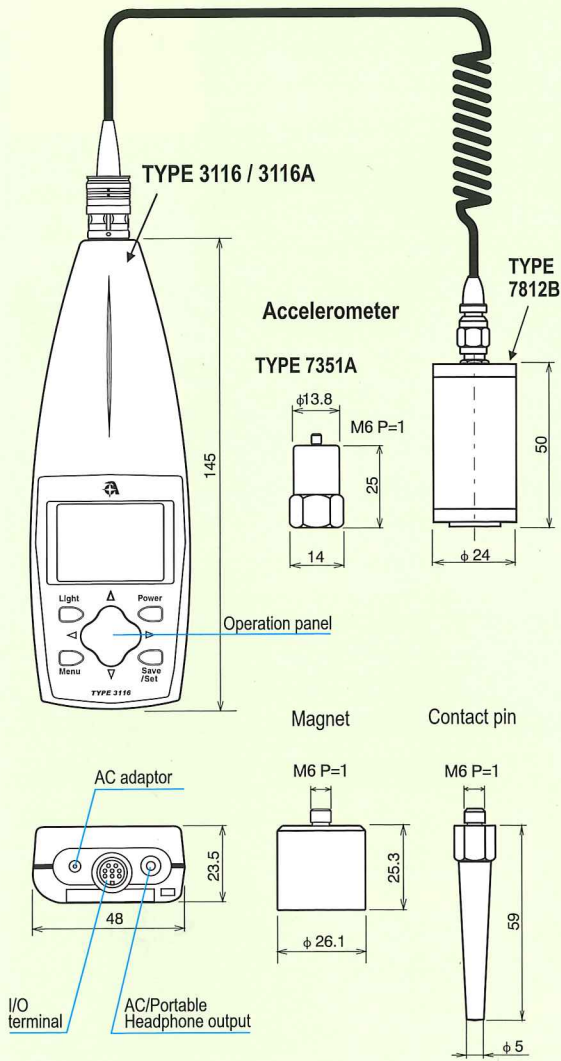


An example of displayed graph of a vibration data



An example of data processing, carried out on spreadsheet software

## Compact size Vibration Meter TYPE 3116 / 3116A



## Specification

Measurement range	
Acceleration (ACC)	: 0.02~200m/s <sup>2</sup> RMS
Velocity (VEL)	: 0.02~200mm/s RMS
Displacement (DISP)	: 2~2000μm EQ p-p
Frequency range	
Acceleration (ACC)	: 3Hz~10kHz
Velocity (VEL)	: 10Hz~1kHz (Compliant with JIS B0907-1989)
Displacement (DISP)	: 10Hz~400Hz
Measurement range	
Acceleration (ACC)	: 20, 200m/s <sup>2</sup> RMS
Velocity (VEL)	: 20, 200mm/s RMS
Displacement (DISP)	: 200, 2000μm EQ p-p
Display characteristics	
Acceleration (ACC)	: RMS, EQ Peak, Peak
Velocity (VEL)	: RMS, EQ Peak, Peak
Displacement (DISP)	: RMS, EQ Peak, EQ p-p Peak EQ Peak=RMS × √2, EQ p-p=EQ Peak × 2
Dynamic characteristics (Time constant)	: RMS, EQ Peak, EQ p-p: 1s Peak: 50msec (rise) / 3s (decay)
Liquid crystal display	
Display	: LCD with backlight 128 × 64 dot
Hold	: Data hold
Digital display	: 4digets, Display Period: 1s or 2s (selectable) (Average of 10 data at 100ms, 1s or 20 data at 100ms, 2s)
Bar - graph	: 0~100%
Warning (Overload)	: [Over] is displayed for full scale
Battery	: 4-level residual display
Data memory	: Max.256, 4kB
Output Terminal	: AC on a Menu screen/Portable Headphone Change selection
AC Output	: Output Voltage : 1Vrms (FS) Load resistance : more than 100kΩ
Headphone Output	: Vibration sound monitor by exclusive Portable Headphone With volume function
Display precision	: ±5%
I/O Terminal	: Data output for PC and Direct output for printer Interface : RS-232C
Operating Temperature Range	: Temperature : -10~+50°C Humidity : 30%~90% (no condensing)
Battery Type and Life	: 2 Alkaline Cells type LR03 Approx.12 hours or AC adaptor
Size and Weight	: 145 (H) × 48 (W) × 23.5 (D) Approx.130g (Include Batteries)

### Guarantee

Term for guarantee is twelve months after delivery. Within this term repair is provided for free should a fault occur while the apparatus is being used in the manner prescribed by the manufacturer. Otherwise, a repair fee will be charged.

HOME PAGE URL <http://www.aco-japan.co.jp/>



### ACO CO.,LTD

85-1 OHTSUKA,HACHIOJI CITY,TOKYO,  
192-0352 JAPAN  
PHONE 0426-76-4661 FAX0426-76-5333