

## Detection, Measurement and Judgment

# VC-2200 Vibration Comparator

### ● Overview

The VC-2200 Vibration Comparator is a high performance signal processor which allows you to input the output signal from an accelerometer installed on the machinery, and to make good or bad “judgment” by measured value in addition to “detection” and “measurement” of vibration.

The VC-2200 retains most of the functions of the VC-2100, can be set more easily and provides a setting error prevention function. The VC-2200 can be used not only as a vibrometer, but also as a continuous monitoring device.

### ● Features

#### 【Compatibility】

- Compatible with the previous model (VC-2100)
- DIN 96×96mm Compact size
- Analog output for external analyzer, etc. is available

#### 【New functions】

- Prevention of setting errors (TEDS function)
- Easier-to-read bar graph display (LOG display)
- Ear protection from an impact noise when setting an accelerometer (Head phone mute button)



Above: Main Unit (VC-2200) + Accelerometer (NP-3331N20) + Signal Cable (NP-0143) + Magnetic Base (NP-0100)  
Accelerometer, Signal Cable and Magnetic Base are sold separately.

\* TEDS (Transducer Electronic Data Sheet) is a standardized method which contains information relevant to a measurement sensor, and defined in the IEEE 1451 series.

### ● Principal usage

#### 【Product inspection】

- Inspection of rattling from washing machines
- Delivery inspection of bearings
- Delivery inspection of motors/pumps
- Inspection of chipped gear teeth
- Abnormal noise detection from an actuator for side mirrors

#### 【Abnormal operation monitoring of machinery】

- Endurance test of engines

#### 【Detection of broken or worn industrial tools】

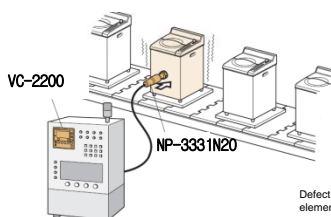
- Detection of broken drills
- Detection of worn grinding wheels
- Detection of chipped teeth of fillet roll machine

#### 【Vibration monitoring of equipment】

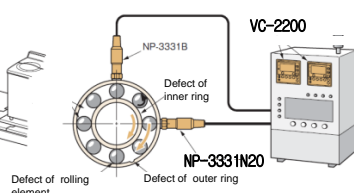
- Vibration monitoring of the rolling mills

### ● Applications

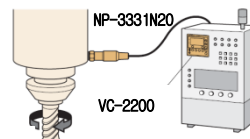
Inspection of rattling from washing machines



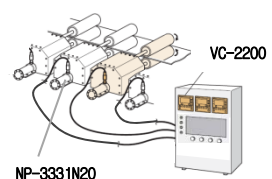
Delivery inspection of bearings



Detection of broken drills



Vibration monitoring of rolling mills



## ● Specifications

### <Input section>

Number of input channels (Connector)	1 (BNC: C02 type)
Cable disconnection detecting function	Automatically detects cable disconnection when using CGLD (CGLD: a sensor interface using constant current supply)
TEDS function	Supports IEEE1451.4 (ver.1.0) TEDS compliant sensor
Applicable accelerometer	CE compliant and floating type accelerometer with built-in amplifier NP-3331B, NP-3331N20 (TEDS compliant)
Input range	Allowable input range: 0.1 to 50,000 m/s <sup>2</sup>
Frequency characteristics	3 Hz to 15 kHz±0.5 dB 1.5 Hz to 20 kHz±3 dB (Reference value: at 160 Hz)
Analog filter	LOW-cut (high-pass) filter: 10 Hz (-18 dB/oct) HI-cut (low-pass) filter: 1 kHz/10 kHz (-18 dB/oct)
Dynamic range	80 dB or more (Input voltage range ×1, ×2, ×5) 70 dB or more (Input voltage range ×10, ×20, ×50, ×100, ×200, ×500)

### <External control>

Terminal board input RS-232C	Key protect, reset input and gate input Individual/batch setting of measurement and judgment conditions are available (Transmission rate: 9,600 bps)
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### <Analysis section>

Number of settable bands	2
Band filter	HPF: OFF/100/300/500/1k/3k/5k/10k Hz (-48 dB/oct) LPF: OFF/100/300/500/1k/3k/5k/10k Hz (-48 dB/oct)

### <Calculation section>

Measurement mode	RMS value, peak value, maximum hold or peak hold (Switchable)
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### <Comparator output>

Function	Judgment is made independently for each band (RMS value test/peak value test is selectable for each band)
NG output	Open-collector output (Positive and negative logic outputs are made simultaneously)

### <Output section>

Output mode	THR(through), AC and DC can be output simultaneously (In case of AC and DC output: select A or B band)
Frequency range	AC: 3 Hz to 15 kHz±0.5 dB 1.5 Hz to 20 kHz±3 dB

### <Display section>

Display	Liquid crystal display with back light (4-digit digital display, bar graph display (Linear/log switchable))
OVER indicator	Lights in red at input range over or A/D over
NG indicator	Lights in red at comparator NG output

### <General specifications>

Outer dimensions	DIN 96 mm(W) × 96 mm(H) × 112 mm(D) Not including protruded section
Power voltage	Rated voltage 24 VDC (±10%)
Power consumption	5 W or less
Operating temperature range	0 °C to +50°C
Operating humidity range	85 %RH or less (With no condensation)
Weight	Approx. 500g
Case material	94V2 PBT (Polybutylene terephthalate)
Conforms to CE marking	

### <VC-0423 Integration software (Option) specifications>

Single integration (Velocity)	∫ : μm/s, mm/s, m/s
Double integration (Displacement)	∫∫ : μm, mm, m

## ● Options (Sold separately)

- VC-0423(Integration software)
- NP-3331N20 (Accelerometer (TEDS))
- NP-0143 (Signal cable)
- NP-3331B (Accelerometer)
- NP-0100 (Magnetic base)

\* If you would like to use an accelerometer except the above, please contact us.

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\* Outer appearance and specifications are subject to change without prior notice.

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