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)

* 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

● Applications

- Inspection of rattling from washing machines
- Delivery inspection of bearings
- Detection of broken drills
- Vibration monitoring of the rolling mills
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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.
**Specifications**

**<Input section>**
- Number of input channels: 1 (BNC: C02 type)
- Cable disconnection: Automatically detects cable disconnection when using CCLD
- TEDS function: Supports IEEE1451.4 (ver.1.0) TEDS compliant sensor
- Applicable accelerometer: CE compliant and floating type accelerometer with built-in amplifier
- Input range: Allowable input range: 0.1 to 50,000 m/s²
- 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)
- 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: Key protect, reset input and gate input
- RS-232C: Individual/batch setting of measurement and judgment conditions are available (Transmission rate: 9,600 bps)

**<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)
- Function: Judgment is made independently 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
- 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
- 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 ℃ to +50℃
- Operating humidity range: 85 %RH or less (With no condensation)
- Weight: Approx. 500g
- Case material: 94V2 PBT (Polybutylene terephthalate)

**<VC-0423 Integration software (Option) specifications>**
- Single integration (Velocity): $s = \mu m / s, \text{mm} / s, \text{m} / s$
- Double integration (Displacement): $\int s = \mu m, \text{mm}, \text{m}$

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

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