

# VM-1970

## 광대역 범용 진동 측정기



### VM-1970 특징

- 넓은 주파수 범위 (1Hz~100kHz)
- 축수 노화등의 발견에 편리한 H관수 측정 가능
- 측정값의 환산, 단위의 변경은 픽업입력감도와 필터에 맞춰 자동설정 (GS단위표시 가능)
- 레벨경보기능 (점점출력)완비
- 다양한 진동가속도계 사용 가능

<b>Output</b>	
Waveform Output	0 ~ ±5V(with a load ≥10k Ω)
Level Output	0 ~ +5V(with a load ≥10k Ω)
Calibration output	80Hz, Sinusoidal wave
<b>Operating Condition</b>	
0 ~ 40℃, 0 ~ 85%RH	
<b>Power Supply</b>	
Battery	aD 4-pcs, Life time : 10hrs approx. at continuous use
External battery	9 ~ 12V
AC Power supply	100VAC ±15%, 50/60Hz, ≤20 VA
<b>Dimensions &amp; Weight</b>	
200W ×150H ×290Dmm (without handle etc) 5Kg approx	

### SPECIFICATIONS

사양 / 제품번호	VM-1970
Input signal	Charge From accelerometer
<b>Measuring Range</b>	
Acceleration(ACC)	1Hz ~ 100kHz(±3dB), 3Hz ~ 70kHz(±0.5dB)
Velocity(VEL)	3Hz ~ 6kHz(±0.5dB)
Displacement(DISP)	3Hz ~ 600kHz(±0.5dB)
<b>Indication</b>	
EQP, RMS value (ACC, VEL), EQP (DISP)	
<b>Measuring Range</b> (When charge sensitivity 1.0~9.99pc/m/s <sup>2</sup> is used.)	
Acceleration(ACC)	1, 10, 100, 1000, 10000m/s <sup>2</sup> , 5-ranges
Velocity(VEL)	3Hz~ 1, 10, 100, 1000cm/s, 4-ranges 10Hz~ 1, 10, 100, 1000cm/s, 4-ranges 30Hz~ 0.1, 1, 10, 100, 1000cm/s, 5-ranges
Displacement(DISP)	3Hz~ 1, 10, 100, 1000mmp-p, 4-ranges 10Hz~ 0.1, 1, 10, 100, 1000mmp-p, 5-ranges 30Hz~ 0.01, 0.1, 1, 10, 100, mmp-p, 5-ranges
<b>H-function</b>	
Acceleration value by wave detection after passing band pass filter of 1kHz. Unit range is the same as acceleration.	
<b>Filter Characteristic</b>	
Low pass filter : (LOW.F):OFF(1Hz), 3, 10, 30Hz High pass filter : (HIGH.F):300Hz, 1, 3, 10kHz, OFF,(100kHz) Cut off characteristic : -18dB, butterworth	
<b>Indication</b>	
Rms : True rms value EQP : Sinusoidal wave equivalent peak value of average value PEAK : True peak value (option) P-HOLD : Hold of max. true peak value (option)	
<b>Alarm Function</b>	
Alarm step	1-step
Setting range	0 ~ 110% of each range
Alarm output	1a relay contact output individual TTL level output
Contact capacitance	30VDC, 0.5A, 120VAC, 0.5A

# V1002

## Laser Doppler Vibrometer Vibroducer(비접촉 레이저 Doppler 진동측정기)



### V1002 특징

- 넓은 동적범위(160dB)와 주파수범위(0.1~3MHz)
- 속도(기본), 가속도(선택), 변위(선택) 측정 가능
- 접촉식으로 불가능하던 작은 물체의 미진동 또는 회전하는 면의 진동측정 가능  
(예 : HDD, FDD, CDD, DVD 등)

### SPECIFICATIONS

Measuring Range		Frequency range	Frequency range
		Velocity	±10m/s (1m/s/V) ±1m/s (0.1m/s/V) ±0.1m/s (0.01m/s/V) ±0.01m/s (1m/s/V)
Acceleration (option)	±10 <sup>2</sup> m/s <sup>2</sup> (10 <sup>3</sup> m/s <sup>2</sup> /V)	1Hz ~ 5Hz	
	±10 <sup>4</sup> m/s <sup>2</sup> (10 <sup>5</sup> m/s <sup>2</sup> /V)	1Hz ~ 50Hz	
	±10 <sup>6</sup> m/s <sup>2</sup> (10 <sup>5</sup> m/s <sup>2</sup> /V)	20Hz ~ 100Hz	
Displacement	±10 <sup>2</sup> m (10 <sup>3</sup> m/V)	1Hz ~ 5Hz	
	±10 <sup>4</sup> m (10 <sup>5</sup> m/V)	10Hz ~ 50Hz	
	±10 <sup>6</sup> m (10 <sup>7</sup> m/V)	1kHz ~ 250Hz	

사양 / 제품번호	V1002
Output	Voltage output, ±10V (to each range full scale)
Light Source	He-Ne laser, Sensor head output : <1mW
Laser Safety Class	Class 2
High-pass Filter	Select from THRU, 10Hz
Low-pass Filter	Select from 25kHz, 250kHz, 1.5MHz, THRU
Laser Spot Diameter	≈30 μm (at measuring distance 20mm with standard lens, close-up ring)
Temperature Range	0 ~ 45℃
Sensor Dimension	100VAC ±10%, 50/60Hz, ≈70VA
Sensor Weight	59W43H122D mm (without lens & protrusion)
Transmitter Dimension	≈550g (without cable)
Transmitter Weight	360W178H390D mm (without & protrusion)
Displacement(DISP)	≈11Kg (without o'n)