RION

MULTI MACHINE CHECKER VM-70

New!

A New Generation Pencil Type Machine Checker

Hi and Lo Ranges Now Combined in One Unit With Temperature Measurement Capability

Easily check for

- Bearing defects
- Gear damage and wear
- Valve leaks
- Unbalanced rotation
- Parts misalignment
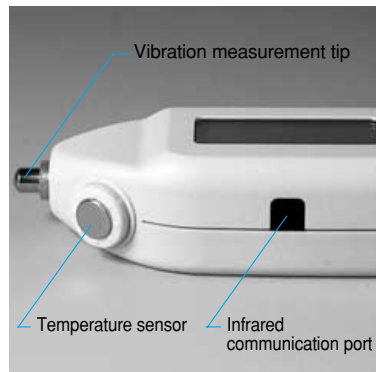- Oil whipping
- Many other items

Features

- Memory for up to 100 data sets
- Surface temperature measurement capability
- Infrared data transmission
- One handy unit for all diagnosis functions
- Cordless, safe measurement
- Compact size, easily fits in a breast pocket
- Low-power design conserves battery power

Outline

This unit is designed to check for defects and aging symptoms in rotating machinery. It covers both the low frequency range suitable for identifying symptoms such as unbalanced rotation, misalignment, rattle, and acceleration in the high frequency range suitable for diagnosis of bearing problems and aging. A built-in temperature sensor allows concurrent measurement of the machinery surface temperature. Data for up to 100 points can be stored in the internal memory. Using the Windows 95 software application Hyper-Terminal, data can be transferred to a computer via the infrared link. This allows storing the data in files and processing them with spreadsheet software.
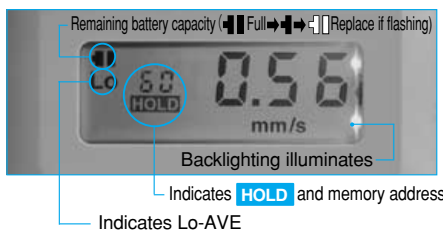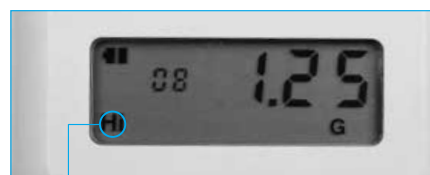
Vibration measurement tip

Temperature sensor

Infrared communication port

Sensors

Operation panel

Functions

Remaining battery capacity (◧█ Full➔█➔▯ Replace if flashing)

0.56 mm/s

Backlighting illuminates

Indicates HOLD and memory address

Indicates Lo-AVE

● Display screen example for Lo-AVE mode, indicating average vibration velocity values in the low frequency range.
Pressing the HOLD button freezes the value on the display.
Pressing STORE RECALL allows storing data in the current memory address.

08 1.25 G

Indicates Hi-AVE

● Display screen example for Hi-AVE mode, indicating average vibration acceleration values in the high frequency range.

54 65 ℃

Memory address

Indicates temperature
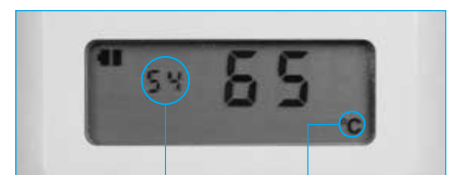
● Display screen example for temperature measurement mode
Stored data are recalled and shown on the screen.

Specifications

Vibration pickup

Type:	Piezoelectric accelerometer (shear-type)
Measurement pressure:	1 kgf
Resonance frequency:	Approx. 32 kHz
Resonance frequency range:	Approx. 550 Hz (-3 dB point)
Sensitivity:	Approx. 18 pC/G (at 80 Hz)
	Approx. 55 pC/G (at resonance frequency)

Temperature sensor

Type:	Thermocouple sensor
Measurement pressure:	Max. 100 g
Maximum allowable temperature:	100℃
Response time:	Max. 10 s

Measurement modes

Lo-AVE (vibration velocity average)
Frequency range:	5 - 1000 Hz
Display range:	0.10 - 1.99, 2.0 - 19.9, 20 - 199 mm/s

Hi-AVE (vibration acceleration average)
Frequency range:	Center frequency 32 kHz, Bandwidth approx. 550 Hz
Display range:	0.01 - 1.99, 2.0 - 19.9 G (relative value)

Hi-PEAK (vibration acceleration peak)
Frequency range:	Center frequency 32 kHz, bandwidth approx. 550 Hz
Display range:	0.1 - 19.9, 20 - 199 G (relative value)

Temperature
Display range:	0.1 - 19.9, 20 - 100℃

Display modes
Lo-AVE, Hi-AVE:	Average of 10 sampled data, 200 ms cycle
Hi-PEAK:	Median of 10 sampled data, 200 ms cycle
TEMP:	Sampled data, 2 s cycle
Display cycle:	Approx. 2 s
HOLD:	Display value is maintained

Liquid-crystal display

Measurement value:	Display range 001 - 199
Measurement modes:	Lo-AVE (mm/s), Hi-AVE (G), Hi-PEAK (G), TEMP (℃)
Memory addresses:	00 - 99
Overload indication:	OVER
Data hold indication:	HOLD
Battery status indication:	Two-segment display
Backlighting:	LED backlight

Data memory: Manual store of up to 100 data sets (00 - 99). All display items (except battery status) are stored.

Infrared communication port

Maximum distance:	10 cm
Data word length:	8 bits
Stop bits:	1
Transfer rate:	9600 bps
For data transfer to devices with IrDA compatible port	

Ambient temperature range for use: -10 to +50℃, 30 - 90% RH

Power supply: IEC R03 (size AAA) battery x 2
Power consumption:	Approx. 75 mA (power supply voltage 3 V, backlight off)
Battery life with continuous use:	Approx. 8 hours (with alkaline batteries, at 20℃)
Auto power-off function:	Automatic shutoff after 10 minutes of switch inactivity

Dimensions: 147.5 (D) x 32 (W) x 24 (H) mm

Weight: Approx. 70 g

Supplied accessories:
Carrying case	1
IEC R03 (size AAA) battery	2
Instruction manual	1

Specifications subject to change without notice.

＊Windows is a trademark of Microsoft Corporation.
＊HyperTerminal is trademark of Hilgraeve, Inc.

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