



## **VIBRATION MONITORING SYSTEM**

**Models - CV 110 / CV 111 / CV 110I / CV 110 ml / VM2 / VM-X**

Reliable

Cost effective

Tailor-made solution

Minimizes maintenance cost

Prevents from false signal

Increases availability of plant

Field setting as per requirement

## Why is machine monitoring necessary?

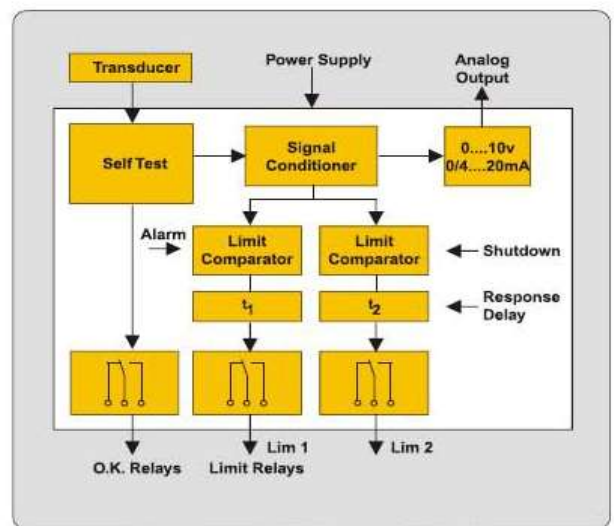
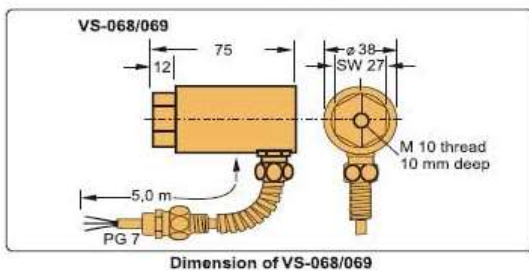
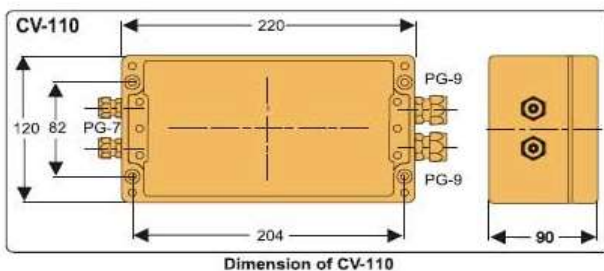
Since all machines are subject to wear during usage, certain maintenance and repair work will, in time, become necessary. To minimize cost and increase the time intervals of maintenance, any functional irregularity should be recognized before the machine itself is endangered. Through permanently installed monitoring instruments, this protection can be achieved, which works as a permanent guard of the machine at a very minimum cost.

Machine monitoring is especially important when machines are exceptionally susceptible to wear and tear and/or operate in hostile environments. Typical examples are blowers, compressors, air cleaners, fans, centrifuges, turbines and pumps.

## How VIBROCONTROL 1000 monitoring helps?

Permanently installed VIBROCONTROL-1000 ensures protection of the machine through immediate detection. It monitors absolute bearing vibration using velocity transducers which represent a reliable criterion for the vibratory behavior of a machine with ball or roller bearings. It minimizes maintenance cost by recognizing the functional irregularity of the machine before damage and by increasing the time interval of maintenance.

We, SCHENCK RoTec India are SOLUTION PROVIDERS in the vibration monitoring field and serve our esteemed customers by providing them tailor made solutions as per their requirements, apart from our standard products.



# The Right Solution



## A) CV-110

- Single channel monitoring unit.
- Converts the pick up signal into the parameter to be monitored (Velocity/Displacement).
- Outputs available are 0/4...20mA and 0...10V D.C.
- Self test facility which trips the O.K. relay if there is any fault in the pick up circuitry, and ensures that no false signal will process.
- Two adjustable limit relays for alarm and trip.
- Time delay facility for alarm and trip, relay to present false signal.

## B) CV-111

- All the features of CV-110 except alarm and trip in the field, however alarm and trip limit can be set with the help of 4...20mA output at PLC or DCS of Plant

## C) CV-110 i

- All the features of CV-110, and
- Has in-built isolator.
- Outputs available are 0/4...20mA isolated and 0...10V D.C.

## D) CV-110 mi

- All the features of CV-110i and
- Has inbuilt analogmeter for continuous vibration reading in the field.

## E) VM-2

- Dual channel monitoring unit, takes the signal of two pick ups.
- Converts the signal of both the pick ups into the parameter to be monitored.
- Self test facilities for signal of both the pick ups.
- Outputs available are 0/4...20mA and 0...10V D.C. per channel (4 outputs).
- Alarm and trip limit can be set with the help of 4...20mA output at PLC or DCS of Plant.

## F) VC1000/VM2 (In Cabinet)

- Multi channel monitoring unit.
- Modular, easy to maintain, configured for 2... to 12 channel/as per Customer's requirement.
- All I/O's are wired and terminated at TB's for Customer's easy access.

# Technical Data

## Parameters

## Models

	CV-110	CV-111	CV-110i	CV-110mi	VM-2	VC1000/VM2 (Cabinet)
No. of channels/input Signal from velocity pick up	One	One	One	One	Two	X
<u>Measuring Parameters</u> Velocity : V <sub>rms</sub> Displacement : S <sub>peak</sub>	Yes	Yes	Yes	Yes	Yes	Yes
Measuring Range Velocity 0-2/5/10/20/50 mm/sec Displacement 0-20/50/100/500 μm	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
Frequency Range Std. 10...1000Hz Option1...1000Hz (for velocity only)	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
Analog output (DC) 0/4...20mA and 0...10V (2 outputs) Working resistance ≤500 Ω Load resistance ≥100k Ω	Yes	Yes	Yes	Yes	0 - 10V & 4 - 20 mA for both channels	VM2 0-10 V & 4-20mA (Dual)/Instrument VC1000 0-10V & 0/4-20 mA Per Instrument
Limits relay Adjustable range 10...100% of measuring range, 2 per channel	2	-	2	2	-	for VC1000 only
Response delay Limit 1 - 1/3/10 sec Limit 2 - 1/3/10 sec	Yes Yes	- -	Yes Yes	Yes Yes	-	for VC 1000 for VC 1000
Self monitoring A separate normally energized "O.K.-Relay" in each channel	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage AC voltage: 230/115V (±10%) 50 Hz or DC voltage: 24V ± (10%)	Yes	Yes	Yes	Yes	Yes	Yes
Operating condition Operating temp. Range - 30...+65°C	Yes	Yes	Yes	Yes	Yes	Yes
Storage Temp. Range -40...+100°C (Relative humidity max. 95% non condensing)	Yes	Yes	Yes	Yes	Yes	Yes
Housing Construction Sturdy Aluminium housing	Yes	Yes	Yes	Yes	Yes	Yes
Protection IP65	Yes	Yes	Yes	Yes	Yes	Yes

## Velocity Transducer

Transducer	VS-068	VS-069
Measuring direction	Horizontal	Vertical
Sensitivity at f <sub>n</sub> = 80 Hz and R = 4K Ω	100 mV/mm/s ± 5%	
Operating temperature	-40...+100°C	
Max. displacement	±0.45 mm	
Cable	5/10/15 m	
Weight (w/o cable)	500 g	

 **SCHENCK RoTec India Limited**

WORKS: Plot No. A-5, Sector 81, Phase - II, Noida (U.P.) - 201 305 India.

Phones: +91120 2563174-79, Fax: +91 120 2563172-73, E-mail: srl@schenck-ind.com, Website: www.schenck-ind.com