



||| Vibes ||| Span

Structural Monitoring of Bridges



Connect



Monitor



Control



Bridging Gaps

SeethaRam Mechatronics Pvt Ltd

Bridging Gaps in Technology

Vibes|| Span Structural Monitoring of Bridges

Structural monitoring involves the process of implementing a damage detection and characterization strategy for engineering structures. Structural health parameters such as corrosion, cracking, strength, tension, location of rebar / delaminations are measured with physical parameters measuring sensors.

Smart sensors with inbuilt power supply, primary sensors and transmitters enable wireless sensor network which helps in remote structural health monitoring.

Structural Parameters	Physical Parameters	Sensor Used
Corrosion	Acceleration	Accelerometers
Cracking	Strain	Strain gauge
Strength	Climatic Conditions	ECO sensors
Tension	Curvature	LVDTs & Inclinator
Location of rebar/ Delamination	Displacements	Precision displacement sensor
	Load	Load cell
	Tilt / Slope	Inclinometer

Accelerometer



The Vibes Accelerometer is an extremely sensitive 3-axis acceleration sensor. It is especially designed for measurements of vibration in structural monitoring (vibration) of whole or parts of buildings, vibration measurement of rotating machinery, for monitoring tower vibration at wind power plants etc.

Accelerometer	The triple-axis MEMS sensor
Frequency response	10 to 4000 Hz
Measurement range	±2g, ±4g, ±8g, ±16g
Transverse Sensitivity	<10%
Cross-Axis Sensitivity	+/-2%
AD conversion	16 Bit

Strain



Possible Sensor Use Cases:
Strain, Load, Stress, Wear on Structures

Sensor Type	Strain Gauge, Rosette, Loadcell
Input Signal	Up to 8mv/V
Output Low Resistance	350 ohm ± 20 ohm

Typical Vibes|| Span Architecture

Vibes Accelerometer-4Nos

Vibes Tilt 4Nos



Vibes Temperature-2Nos

Vibes Strain-20Nos

Vibes Load cell-1No

Vibes Displacement-1No

Mini Server with Time Stamp Data Base

Tilt

The tilt sensor is packaged in a rugged enclosure with simple mounting features. It's designed to be immune to harsh conditions.

Tilt Meter	Biaxial MEMS sensor
Biaxial Angle	±15°
Resolution	0.001°

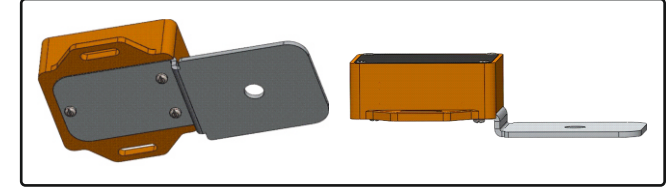
ECO

This Probe is meant for industry-proven quality and reliability in measurement of humidity and temperature sensors and constant accuracy Continuously, 24 x 7 for many years.



Humidity	0% ~ 100% Rh
Temperature	-40°C ~ 125°C
Accuracy	±2% Rh, ±0.2%°C

Temperature



Semi-conductor-based Temperature Sensor for

- Sustained high performance characteristics
- Low power consumption especially battery operated Application

Temperature	-55°C to +125°C (-67°F to +257°F)
Accuracy	±0.5°C from -10°C to +85°C

Gaman



The **VIBES GAMAN** series linear displacement pulsed probe is a spring loaded plunger type precision linear measurement sensor.

Stroke Length	25mm, 50 mm
Resolution	12/6/3µm

SeethaRam Mechatronics Pvt Ltd provides products and solutions for IOT Ecosystem. Apart from catlog offerings, you may contact us for complete electronic design solutions from the stage of design to manufacturing for IOT's / Embedded Products. Right from PCB layout, board & enclosure designs integrating embedded electronics, digital and analog acquisition, and power systems, we can do it all.

Few Developed Products & Solutions

- ✓ Touch Screen Indicators
- ✓ Controllers & Loggers
- ✓ Signal Splitters, Conditioners
- ✓ Humidity, Temperature Sensor
- ✓ Lux Sensor
- ✓ Wi-Fi RTU & Protocol Gateways
- ✓ Vibes Agriculture
- ✓ Vibes Mobility
- ✓ Vibes Warehouse
- ✓ Vibes Maintenance
- ✓ Force & Torque Sensors
- ✓ Strain Links & Vibration sensors

Few Customers

