

- **Four Versatile Vibration Guards**
- **Fastest Possible Response Time**
- **Relay and Level Output**
- **Motion Pattern Analysis**
- **Built-in Signal Processing**
- **Price Competitive**

Overview

The Gram & Juhl DAM-XY01 sensor is an intelligent sensor with built-in digital signal analysis that offers advanced motion monitoring facilities at low system costs. Applications include monitoring and analysis of structures, such as wind turbines, bridges, towers, cranes, and buildings. Since the DAM-XY01 is a self-contained digital device there is no risk of damaging an external sensor and cabling is straightforward. This makes the DAM-XY01 most reliable for critical systems.



Structural Vibration Monitoring SVM

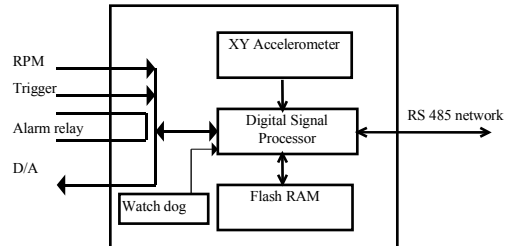
The DAM-XY01, with its DC coupling, is well suited to measure low frequencies simultaneously in X and Y direction. This is used for calculating the motion of the structure onto which the sensor is mounted. When narrowed in bandwidth, e.g. around a resonance frequency, this converges to an ellipsis showing orientation and maximum deflection.

Continuous Vibration Guards

The sensor has four continuously running vibration guards. The guards are independently configured regarding direction(s), frequency band, level, and response time. Alarms are signalled via a relay switch and an analogue voltage. Further, all alarm events are stored internally in non-volatile memory. The vibrations guards are optimised to provide the fastest possible response time.

The Sensor

The DAM-XY01 has an internal two-axial accelerometer. Further, the unit has input for tachometer pulses or triggers, solid-state relay and an analogue output (0-5Volt). Thus, motions can be related to machine operation as expressed via RPM, which allows for advanced monitoring.



Stand-alone or Internet operation

The DAM works on its own or on a network. When operating with a host e.g. the hardware front end, the M-System, in the TCM® System, monitoring results are communicated via a RS485 multi-drop serial bus. The host can be connected to as many as 32 DAM units on a single DAM network. The DAM network protocol is open so any controller with a serial port may interface to the DAM network. The DAM-XY01 can be applied to remote monitoring using the TCM® WEB software.

Open System Architecture

In a networked environment, access to DAM units is provided via the Gram & Juhl TCM® system or some custom service (open protocol). Contact Gram & Juhl A/S for further information.

Sensor Measurements

| DAM Measurements | Application | | |
|--------------------|-------------|----------|------|
| | SVM | Bearings | Gear |
| Time, FFT, Overall | ✓ | ✓ | ✓ |
| Vibration Guards | ✓ | | |
| Zoom, Envelope | | ✓ | |
| Zoom, Cepstrum | | | ✓ |

