

Vibration On Site Monitoring

- MAKE SURE YOUR BUILDING IS NOT BEING AFFECTED BY LOCAL VIBRATION FROM CONSTRUCTION OR OTHER EVENTS •

Overview

Construction, demolition or even heavy traffic can often cause unforeseen problems to neighbouring structures due to vibration. **Palert+** is a simple system to monitor the impact of this vibration on your building.

With just a single **Palert+** unit and an attached multi-coloured light, you can instantly see if the nearby work is causing any impact. Using international vibration standards **DIN 4150-3** or **ISO 2631**, the system can ensure protection for your building. It can be used to make sure that the contractors are not exceeding vibration levels and meeting their compliance requirements.

Data is also sent directly to the cloud for engineers to see remotely the issues and direct construction accordingly.



Key Benefits

IMMEDIATE Vibration Warning

Onsite :

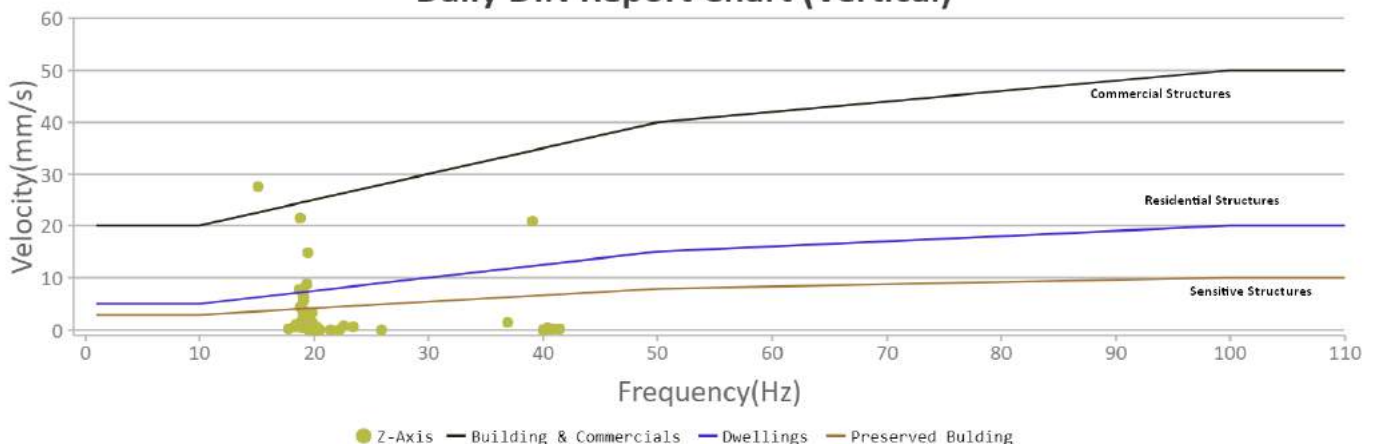
- Realtime value display on LCD
- Signal Tower showing warning
- Maintain safe working environment

Offsite :

- Reporting via web browser of details
- Palert+ push message from app
- Enable engineer to alter work accordingly

Prevents major damage to buildings due to breaches of vibration levels, with full engineering monitoring.

Daily DIN Report Chart (Vertical)



Specifications

Accelerometer

- Tri-axial MEMS (Accelerometer) 18 bit, Analogue output
 - Range: ± 2 g
 - Dynamic Range: 100dB
 - Accuracy: $\pm 2\%$ (0.8 to 20 Hz)
 - Resolution: 0.015 gal
- Velocity Sensor Type: Geophone Analogue output - *optional*
 - Full scale: ± 100 mm/s
 - Resolution: 0.00016 mm/s
 - Frequency range: 4.5 to 315 Hz
 - 0.1 to 315 Hz (compensated)
 - Dynamic range: > 130 dB
 - Case to Coil Motion P-P: 4 mm
 - Moving Mass: 11.0 ± 0.1 gram
 - Sensitivity: > 25 Vm/s
 - Spurious Frequencies: > 240 Hz
- AD Resolution: 4 Channel, 24-bit data
- Sampling rate: 50 sps, 100 sps, 200 sps (optional)

System

- CPU: ARM1176JZF-S 700MHz
- Data Storage Type: 8GB MicroSD
- Ethernet Controller: 10/100 Base-TX - MODBUS/TCP
- LCD display: 2-line x 20 character
- Watchdog Timer: 10 seconds
- RTC Accuracy: ± 60 seconds/year, adjustable by NTP
- Calibrated by International Test Lab

Environmental

- Operation Temperature: $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$
- Operation Relative Humidity: 10 ~ 98% RH
- Dimension(mm): 205 x 160 x 80 Nominal
- Weight: 2.1KG
- Supply Voltage: 9~30 VDC
- System Power Consumption: 3 W
- Internal battery
- Waterproof Rating: IP67
- Built-in web user interface, simple and convenient settings.
- AUX Port for Relay control (3 levels) and output audio
- Providing earthquake early warning audio output (Optional)
- Seismic event data recording function.
- Built-in standby power, with safe shutdown protection.
- Set-point Range: 1~1960 gal
- Contact Type: Normal Open
- Contact Capacity: 60V / 0.6A DC
- Hold-On Time: User defined

Earthquake Gauge

- Algorithm: Pd, PGA, Displacement, STA/LTA
- STA Setting Range: 0.1~100 seconds
- LTA Setting Range: 0.1~200 seconds
- Event Duration Time: 1~200 seconds
- Waterproof Rating: IP67



Palert+ System

Background

Palert+ is one of a family of advanced earthquake P-wave alarm detector systems developed by San Lien in Taiwan, in conjunction with University Research departments, and represented by Jenlogix in Oceania and Americas.

Palert+ is a P-wave sensor equipped with MEMS accelerometers for 18 bit output resolution. When integrated into a network using SCADA or the dedicated controller, the Palert+ provides the ability to trigger digital outputs enabling warnings and other actions to occur before or during an earthquake.

With Modbus TCP/RTU capabilities, it is very easy to integrate Palert+ with industrial applications, such as PLC, HMI and SCADA. The Palert+ can stream to 2 hosts and connect to 5 Modbus clients at the same time.

See www.earthquakeearlywarning.systems for more information.