ONLINE MONITORING SYSTEM (APT-OMS)

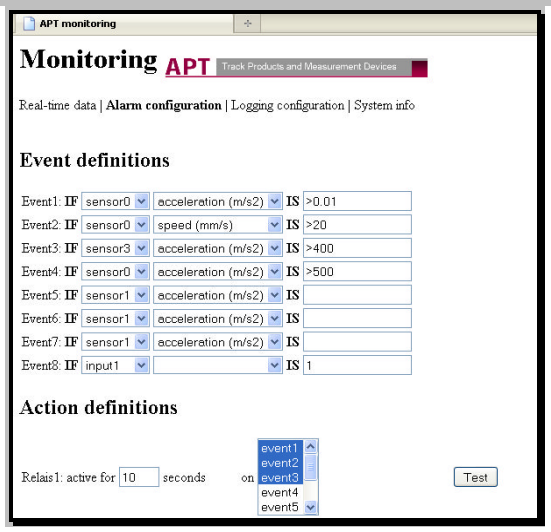
GENERAL

The APT-Online Monitoring System (APT-OMS) aims at the acquisition and real-time processing of measured data of all kinds. The advantages of this multifunctional data logger are:

- High available processing power for real-time calculations.
- No software installation required as real time and historical results are viewable on any PC or PDA with a standard internet connection.
- Easy configuration of the data processing and alarm actions (siren, SMS, email, flashlight) via the web based interface.
- High flexibility with respect to the number and type of measurements and processing algorithms

The electronics is designed to be robust to the severest environment (vibration, temperature, power interruptions).

EASY CONFIGURATION & RESULTS ANALYSIS

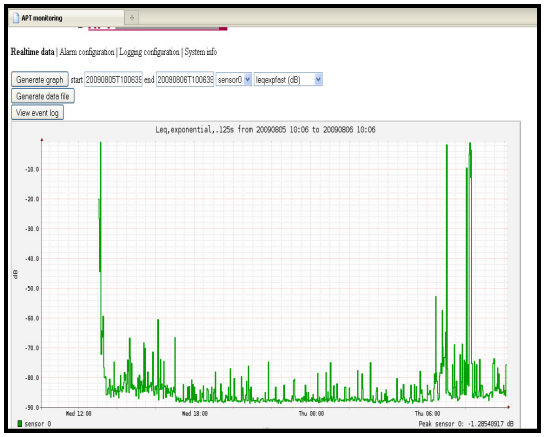


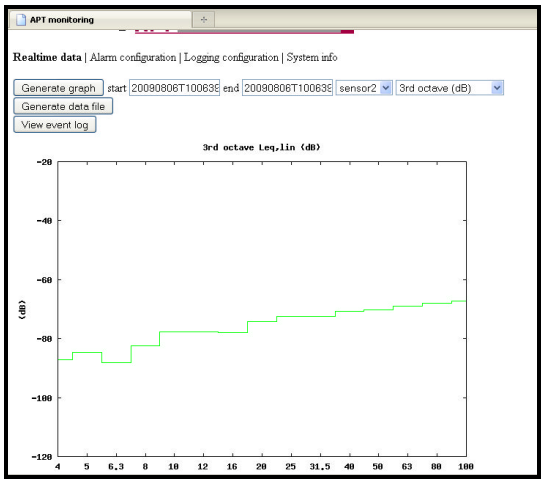
- web-based configuration (configure from any PC, no software installation)
- Easy configuration of alarm events and actions.

APPLICATION DOMAIN

Monitoring and recording for:

- Site evaluation and seismic re-qualification (buildings, bridges, towers, …)
- Construction monitoring (pile driving, compactions)
- Traffic induced noise and vibration measurements (railway, highway, subway, …)
- Meteorological conditions
- Air quality
- …





- Real-time data analysis
- Time or spectrum graphs
- Raw data download for off-line analysis

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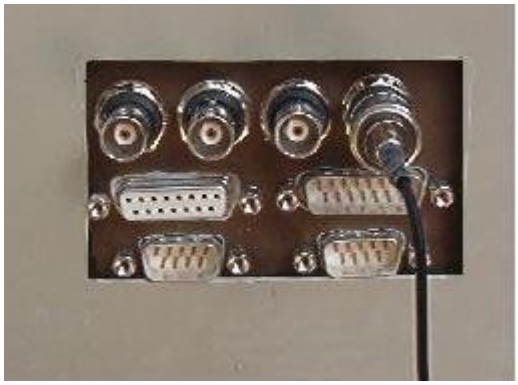
SYSTEM HARDWARE

- Industrial computer with mobile communication
- Data acquisition module
- Power supply and battery module



SPECIFICATIONS

Sensor connections	4x 24bit AD converter with ICP power
Sampling frequency	DC up to 50 kHz
Storage	– 512 MB Compact Flash – 80 GB hard drive (optional)
Software	Web-based configuration (Internet Explorer, Firefox…)
Power supply	230 VAC
Environment	-20 °C to +55 °C
Processing	
Analysis algorithms (standard)	– Vibration acceleration (RMS) – Vibration speed (RMS) – $L_{eq,\ linear}$, $L_{eq,\ exponential\ fast/slow}$ – $L_{eq,\ wm}$ according to ISO2631 – L_{eq} in 3rd octave bands
Customized analysis algorithms (optional)	– customer supplied algorithm – development of new algorithm
Alarm action (user configurable)	– SMS – Email – Siren (optional) – Customized Alarm Action (optional)
System interfaces	
Sensor inputs	4x BNC 24bit DA 2 kHz sampling with ICP power
Logical inputs	5x optoisolated 3-28V
Logical outputs	6x voltage free contacts (4x NO, 2x NC) max 30W, 220V
Wired communication (standard)	– 1x RS232/422/485 – 1x USB 2.0 – CAN, Ethernet, current loop
Wireless communication (optional)	– GPRS/UMTS/SMS – WiFi IEEE 802.11 b/g