

ShakeAlarm® Lite Powered by USGS ShakeAlert® – MODEL AS-0609-01

ShakeAlarm® Lite Powered by USGS ShakeAlert® is a cost-effective, highly reliable Earthquake Early Warning System (EEWS) which provides critical minutes or seconds of warning in order to minimize loss of life and assets. This is done by interfacing to the **USGS ShakeAlert®** network, interpreting and analysing the earthquake early warning data from the network, and generating alarms and warnings as necessary.

ShakeAlarm® Lite may be used in industrial or residential buildings. When used in conjunction with industrial or civil infrastructure control systems, these critical seconds of warning can be leveraged to save lives, minimize runaway failure modes in critical structures, and shut down gas and electricity feeds to infrastructure, minimizing fire risk to assets after the seismic event. **ShakeAlarm® Lite presently protects schools, municipal and state facilities, water/sewage treatment facilities, transportation infrastructure, refineries, and private residential properties.**

The following are examples of actions that can be taken when early warning of an approaching earthquake is received by **ShakeAlarm® Lite**, determined to be a safety concern, and generates an alarm:

- “Duck and Cover or Evacuate” message may be broadcast to connected public address (PA) systems
- Trains may be brought to a full stop in a safe track location
- Gas and electricity may be shutdown
- Elevators may be returned to the ground level
- Fire doors may be opened to in case they get jammed when the earthquake arrives

ShakeAlarm® Lite provides additional seconds of warning which can, as part of an earthquake preparedness plan, translate directly into the reduction of casualties and property damage.

When **ShakeAlarm® Lite** is deployed in schools, hospitals, residences, and on large infrastructure projects, such as tunnels and bridges, it provides critical seconds of warning to evacuate or to seek cover. A USB input allows storing of custom audio messages to broadcast. Test button makes annual testing and emergency drills easy. A tri-colour LED continuously displays system operational status. Two relay outputs may be used to connect to local alarms, building control systems, valves, and other control equipment.

Basic installation is simple: connect to power, connect to network, connect to PA system input, connect relay outputs to local alarms, local equipment, and/or control systems.

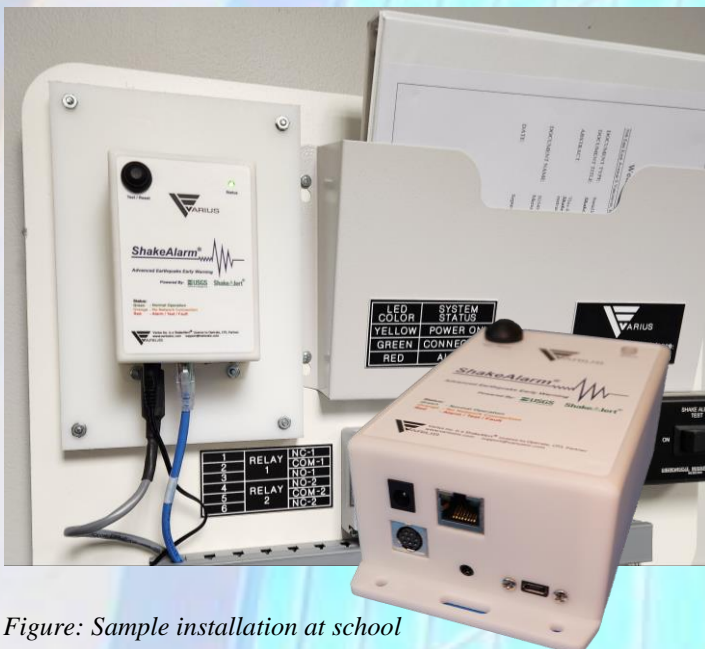


Figure: Sample installation at school

Power Connection:

120V/240V AC standard plug

Network Connection:

RJ45 Ethernet jack

Audio Output to PA System:

3.5 mm stereo audio jack

Relay Outputs”

Standard Form C Relays x 2

Micro USB Connection:

Upload custom broadcast messages

Status LED:

Tri-colour (Red, Orange, Green)

Size:

3.5" x 6.0" x 2.73"

(89 mm x 152 mm x 70 mm)

Weight:

~0.5 lbs. (0.25 kg)



Powered By:



www.shakealarm.com

System:

Linux based continuous real-time data acquisition and recording with capability to be set for event-based alarming. Built-in unit health monitoring. Thresholds are programmable and remotely configurable over a Web Dashboard with set levels of control. The unit interfaces to the **USGS ShakeAlert®** network via the Internet.

Material:

Durable polycarbonate

Operating temp:

0 to +70°C

Mounting:

DIN rail (DIN rail and screws included)

Mounting holes (4 x #8 screws)

CORPORATE BACKGROUND

Varius Inc. is a **USGS ShakeAlert®** License to Operate (LTO) partner and brings a level of expertise and experience to its clients that is often not available using conventional business practices. Most experienced engineers and professionals often take a backseat on design projects and are involved instead in administration and management. At Varius, its experts work directly with clients and clients' staff. With this level of involvement on the project, clients receive unmatched attention from some of the industry's leading experts. The Principals at Varius have over 40 years of industry experience. They understand the importance of relationships and how the best projects are really about people, not about math and spreadsheets. They learned about the importance of value, and how low overhead costs and sustainable ideas can be leveraged into immense value for their clients and their communities. They also understand the significance of taking on clients' challenges, finding solutions, and being accountable to the general public.

Varius has partnered with Weir-Jones Group which specializes in turnkey structural, and geomechanical monitoring/testing services to infrastructure, energy, mining, and marine clients around the world. Weir-Jones has provided products and solutions in more than 55 countries for over 50 years. All **ShakeAlarm® Lite** units are assembled in the USA and manufactured with ISO 9001:2015 certification.

OTHER **ShakeAlarm®** PRODUCT LINES

ShakeAlarm® with Sensors

In addition to interfacing to the **USGS ShakeAlert®** network, the unit is connected to external accelerometers or geophones to detect earthquakes locally, without the need for a USGS network connection. This is done by recognizing and quantifying the faster, lower energy, P (compressive) wave which is the precursor of the more damaging S (shear) wave. This local detection significantly reduces the delay in receiving the warning and provides more time to execute emergency measures.

ShakeMonitor®

The system monitors structural data and provides post-event analysis related to the safety of the structure within a few minutes after the earthquake arrives. Using this information, infrastructure assessments may be performed in hours instead of weeks, enabling normal operation or remediation to commence quickly. For some facilities, such as airports, being able to resume operations in a few hours instead of a few weeks has immeasurable value.



ShakeAlarm® and **ShakeAlert®** are registered trademarks in the USA and Canada and owned by Weir-Jones Engineering Consultants Ltd. The operating systems of this device may incorporate aspects of Canadian Patent 3027717 and US Patent 10755548. For more information contact info@weir-jones.com or visit www.weir-jones.com.

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