



EARTHQUAKE SAFETY SYSTEMS, INC.

www.eqsafetysys.com

SATURN Series 'Smart' Seismic Switch w/ ASCE 25, ASME A.17 or CA3137 Selectable Response



MODEL S-001

High integrity switch offers economical 24/7 protection. Provides emergency control or shutdown, and reports local XYZ peak earthquake intensity data in "g" force.



Suitable for: Control Rooms, Industrial Processes, Systems, Motors, Electronic Doors, Personnel Safety Alarms – via existing P.A. systems, Elevators, Solenoids and O.E.M. applications.

Compliance with ASCE 25, ASME A17.1 and CA3137 is achieved with this highly flexible, state-of-the-art technology.

DESCRIPTION:

A ready-to-install **UL 508** robust seismic switch, complete with three Form C control relay outputs providing dry, isolated Form C contacts, battery back-up and external charger. Detects "P" & "S" waves. Sensor control setpoint (trigger level) is user-selectable to local requirements. NEC Electrical Code compliant (operator not exposed to electrical circuits for RESET or TEST). Following a seismic trip, system is either held in protective 'latched' position until manually reset or, programmable for momentary trip (1 to 60 seconds). For use in protected industrial and commercial environments.

The maintenance free, solid-state digital, tri-axial seismic sensor measures earthquake intensity in "g" force on X, Y & Z axes, **and in real-time outputs Peak Ground Acceleration values (PGA) corresponding to the seismic trip for system performance review.** Filtering devices make it immune to industrial vibrations such as heavy equipment, trucks, compressors, trains, etc. Proven performance next to rail lines, factory environments, etc. 2/2 or 2/3 voting via multiple seismic switches is recommended for extremely cost/safety sensitive applications.

Internal terminal block provides simple field wiring termination for power and control relay outputs.

When Earthquakes Strike

Trust ESS

SATURN Series 'Smart' Seismic Switch

MODEL S-001

SPECIFICATIONS*

- Sensors:** Solid state, triaxial accelerometer in three orthogonal axes. Detects vertical "P" and horizontal "S" wave earthquake acceleration (X, Y & Z axes). Stores and displays Peak Ground Acceleration (PGA) values on each axis, in "g" when triggered.*
- Frequency Response:** 1 Hz - 10 Hz or, 1 Hz – 15 Hz as programmed. Sensor filters non-earthquake (industrial) vibrations. User- adjustable for ASCE 25, ASME A17.1 & CA3137 trigger response.
- Setpoints:** User selectable from 0.025g-pk to 0.5g-pk on each axis (X, Y & Z) via most commercial serial communication programs.
- Communications:** RS-232C serial (3-wire) or USB for programming & PGA data recovery.
- Diagnostics:** Power-On Self-Test (POST) and diagnostic commands.
- LED indicators:** "Seismic Trip"; via internal LED indicator and integral lamp in front panel Test/Reset switch.
- Seismic Activation:** Front panel visual indicator, Form C relay contacts.
- Control Output:** Three independently programmable alarm output control relays. Form C, dry, isolated alarm relay contacts rated 10 amps @ 250 VAC (resistive). Unit provides one (1) common fault alarm (power or sensor) and two (2) seismic alarms. Following a seismic trip, system can auto-reset after delay OR remain latched until manually reset via front panel switch.
- Power Supply (UL):** 120 VAC, 50 / 60 Hz or 220 VAC, 50 Hz (specify). Rechargeable 12 VDC, 1.2 Ah Sealed Lead Acid battery. 8 hr reserve in 'non-trip' state. External charger.
- Physical:** Size, 8" W X 8" D X 5" H; 9 lbs (19 lbs w/ mounting plate) Enclosure NEMA 4 horizontal standard. Options: NEMA 4X, bypass switch and/or vertical wall-mount Sealed cable and conduit entry fitting. Operating temperature, -20° C to + 70° C. Humidity, 0% - 100% (non-condensing).
- Installation:** Via four ¼" bolts (one concrete anchor bolt with optional aluminum mounting plate), rigidly attaches directly to building slab or other large, inertial seismic mass.

*(Subject to change).



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