



QUAKELOGIC

Disaster Risk Management Solutions

SATURN Series 'Smart' Seismic Switch w/ ASCE 25-97 / ASME A.17 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 25-97, 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 re-set 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

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 25-97, ASME A17.1 & CA3137 trigger response.
Setpoints:	User selectable from 0.025g to 0.5g on each axis (X, Y & Z). Terminal communication program supplied with instrument.
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 4 amps @ 250 VAC). Unit provides one (1) common fault alarm (power or sensor) and two (2) seismic alarms. Following a seismic trip, system can automatically 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. 1+ hr reserve at maximum demand. External charger.
Physical:	Size, 8" W X 8" D X 5" H; 9 lbs (19 lbs w/ mounting plate) Enclosure NEMA 4 standard. Options include: NEMA 4X, bypass switch and/or vertical mount Sealed cable and conduit entry fitting. Operating temperature, -20° C to + 70° C. Humidity, 0% - 95% (non-condensing).
Installation:	Via four ¼" bolts (one bolt for optional plate), rigidly attached directly to building slab or other large, inertial seismic mass. Mounts horizontally. Vertical (wall-mount) unit optionally available.

*(Subject to change).