APOLLO Series 2100 Seismic Switch

SHUT-IT-DOWN SAFELY & SECURELY
With the
APOLLO EMERGENCY SEISMIC SWITCH

Ideal for all critical Industrial Applications where accidental shutdowns cannot be tolerated, e.g.:

- Valves, Solenoids and Actuators
- Process Control/Systems
- Pipelines / Pumping Station
- Hazardous Material / Chemicals
- Electronic Security Doors
- Motors, Elevators, etc.

DESCRIPTION:

A fully integrated industrial seismic switch with tri-axial digital seismic sensor ("P" & "S" waves) and minimum 8-hour reserve battery power. The monitor is shipped complete with pre-drilled base plate for easy installation. A NEMA-4 enclosure is shown below; stainless steel above. An optional stainless steel secondary enclosure provides NEMA-4X rated protection.

Seismic alarm and control setpoints (trigger values) are user selectable to local requirements. Outputs peak ground acceleration (PGA) values for all three axes in real-time for retrieval via RS-232C serial connection.

Internal terminal block provides simple field wiring terminations for AC power (110 Vac / 60 Hz standard), Level 1 Alarm, Level 2 Alarm, Loss of AC Alarm, Seismic Trip Alarm (all alarm output contacts are FORM C, rated at 230 Vac, 6A).

Options include: 230Vac / 50 Hz power supply, time history recording with digital recorder module.

FEATURES:

**SPECIFICATIONS**

**Seismic Standards:**
Compliance with ASCE25, ANSI Z21-70, ASME A17 and other seismic standards is achieved with this intelligent and flexible, state-of-the-art technology.

**Sensors:**
Solid state, triaxial accelerometer in three orthogonal axes (X,Y & Z). Detects vertical “P” and horizontal “S” wave accelerations. Outputs **Peak Ground Acceleration** (PGA) values upon exceeding setpoint.

**Frequency Response:**
1 Hz to 15 Hz. Digital filter protects from industrial vibrations.

**Set-points:**
User selectable; 0.025 g to 0.5 g on each axis (XYZ) in 0.001 g increments.

**Communications:**
RS-232C serial connection

**Diagnostics:**
Self-diagnostics at power on and reset. Front panel visual indicators: “AC power on”, “Level 1 Alarm”, “Level 2 Alarm”.

**Control Outputs:**
Two (2) independent Form C (NO & NC) dry, isolated alarm relay contacts change state on acceleration exceeding the user’s programmed set-points; latched alarm or momentary up to 2 minutes. Contacts rated up to 250V/6A. Default configuration is latched until operator reset.

**Power Supply:**
120 VAC, 50/60 Hz or 220 VAC, 50 Hz (specify at order). 8-hour autonomy, maintenance-free battery. Optionally powered by 24 Vdc.

**Physical:**
Horizontal, NEMA 4 paint, 15” W X 15” D X 10” H (standard).
Horizontal, NEMA 4 stainless, 16” W X 16” D X 10” H (optional)
Vertical NEMA 4 stainless, 16” W X 16” D X 10” H (optional)
Horizontal, NEMA 4X via secondary stainless enclosure, 24”W X 24”D X 12”H
(See photo right). Fully gasketed door.
Status indicators: Fault, A/C power loss, Seismic trip, AC Power “On”
Operating temperature, -25º C to +70º C.
Humidity, 0% - 100% (non-condensing) with secondary NEMA4X enclosure.
Weight, 35 lbs. including battery (approx).

**Installation:**
Via four (4) ¼” bolts attached to pre-drilled aluminum baseplate (provided with Apollo), mounted horizontally. Baseplate weight is 12 lbs. Panel may be wall-hung (requires external floor-mount sensor) in some circumstances (consult factory for details). Precise leveling not required. Baseplate mounted to concrete pad/floor via two anchor bolts.

**Options:**
Various custom logic schemes / redundancies using flow, pressure, leak detection & level monitoring sensors as a positive feedback.

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*(Subject to change).*