

# DSD-080

## SEISMIC SECURITY PANEL



### DESCRIPTION

DATAKOM DSD-080 Seismic Security Panel monitors seismic motions of a strong earthquake and provides relay output signals from it. Output signals are used to shut-off critical installations as natural gas and LPG systems, generators, elevators and the like.

The unit helps reducing damages of a probable earthquake. On its graphical display screen, the unit shows system status.

DSD-080 incorporates highly sensitive triple axis seismic sensors. The unit is maintenance free and capable of making self-test. The earthquake sensing specifications of DSD-080 conforms to both ANSI Z21.80 (1981), ASCE 25-97 and TS-12884(2002) standards.

DSD-080 operates on mains with a battery backup. 24V/1.2A-h batteries are incorporated to the unit. The unit provides automatic battery charging feature. During long mains failures, if batteries get low, the unit gives audible and visible alarm.

#### **IMPORTANT NOTICE:**

Early sensing time depends on the distance of the unit to the seismic epicenter. Generally it is possible to have 1 second early warning time for each 8 kilometers. For example if the epicenter of the earthquake is at a distance of 40 km, it is possible to give an early warning 5 seconds before the arrival of the destructive S (secondary) waves.

Due to its high sensitivity, the early warning may give false alarms. For example if an earthquake of small magnitude occurs, the unit will possibly sense it as the P (primary) waves of a strong earthquake.

### FEATURES

- **Wide operating voltage range (85-305VAC)**
- **Conformal to international earthquake standards**
- **Triple axis motion detection**
- **Automatic self-test**
- **Internal audible warning**
- **Internal 24V battery**
- **5 programmable relay outputs (5Amp)**
- **Visual indicators for battery status**
- **Wide operating temperature range (-10...70°C)**

### TECHNICAL SPECIFICATIONS

**Operating voltage:** 85 to 305VAC

**Supply power:** 4W maximum.

**Battery charge voltage:** 27.5VDC (+/-0.2V)

**Battery charge current:** 100mA. maximum

**Low battery voltage limit:** 22V. (+/- 0.3V)

**Current drain from battery:** 15mA. max from 24VDC (All relays passive) Additional 6mA for each energized relay.

**Battery capacity:** 24VDC, 1.2A-h

**Operation from battery:** >24 hours (typically 72 hours)

**Self test:** At power-on and reset.

**Switching:** 5 relay outputs (5A / 30VDC / 250VAC)

**Audible warning:** 85dB/1m buzzer.

**Operating temperature range:** -10 to +70 °C

**Relative humidity:** %10 to %90 (non condensing)

**Weight:** 1900 grams (approximative)

**Dimensions:** 192 x 120 x 65mm (W x H x D)

#### **Sensor Specifications**

**Sensör type:** Triple axis polysilicon semiconductor acceleration sensors.

**Sensor operating limits:** ±2g.

**Sensor failure limit:** more than 50g.

**Acceleration threshold:** TS12884, ANSI Z21.80 (1981), ASCE 25-97

**Detection delay:** 0.5sn. maximum

**Frequency range:** 0.5Hz to 25Hz

