JENLOGIX
INDUSTRIAL TECHNOLOGY PARTNER

Palert

P-wave Seismic Sensor

Asset and System Protection

• PREVENT DAMAGE AND MITIGATE RISK BY PROVIDING WARNING AND SHUTTING DOWN VITAL SYSTEMS BEFORE AN EARTHQUAKE STRIKES •

Overview

The cost effective **Palert** seismic sensor can be used in critical industrial environments integrated with existing control systems to prevent equipment or facilities damage caused by an earthquake.

This is achieved by partial or full shut down of critical equipment before the earthquake shock waves arrive. The **Palert** seismic switch can be set to trigger two different switches at the desired shock intensity.

The same switch can be used in a network to activate alarms and evacuate personnel before earthquake arrival, prompting them to vacate a high-risk area plus unlocking exit doors, switching emergency lights, etc.

Key Features

- Warning before/during/after Earthquake shock waves arrive
- Automated shut-down of vital devices (pre-earthquake)
- Activate emergency operation sequence for industrial processes
- Easily scaleable to enhance data collection and functionality
- Easy to integrate with industrial applications using PLC, HMI and SCADA
- Most cost effective solution available in the market

Applications

- Water mains Pumping/Distribution stations
- Petrochemical Refineries
- Hazardous substances management in industrial environments
- Mining Operations
- Waste Control
- Tilt Bridges, Tunnels
- Land based Oil Exploration operations
- Geothermal Plants, Wind farms, Hydro Electric Plants
- Hospitals
- Ski fields, Museums, Theatres.
- Subways, Trains, Trams

Specifications

Accelerometer

- Type: Tri-axial MEMS
- Range: ± 2 g (b, c Axes); + 1 g / -3 g (a Axis)
- Frequency Response: 0.05~20 Hz
- Displacement Frequency: 0.075 HPF
- Response: 3000 g 0.5ms
- Shock: 10000 g 0.1ms

Resolution

- Output Resolution: 16 Bits

Earthquake Gauge

- Algorithm: Pd, PGA, Displacement, STA/LTA
- STA Setting Range: 0.1~100 seconds
- LTA Setting Range: 0.1~200 seconds
- Event Duration Time: 1~200 seconds

Switch Set-points

- Digital Output Numbers: 2
- Set-point Range: 1~1960 gal
- Contact Type: Normal Open
- Contact Capacity: 60V / 0.6A DC
- Hold-On Time: User defined

Power

- Supply Voltage: 10~30 V C
- Power (12V): 3.5 W

Input/Output

- Modbus RTU: RS-232 or RS-485 format 19200, N, 8, 1
- Modbus TCP: 5 Hosts Simultaneously
- Modbus ID: Default 101, settable
- Modbus Function: Function 3 and 16
- Active Connect to TCP Server: Support 2 TCP Servers
- Time Calibration: Via NTP or PC Utility
- Data Recording: Via Network by PC Utility

Size

- Dimensions: 125 x 105 x 30 mm
- Weight: 450g (without Power and Cable)

Environment

- Operation Temperature: -10~60°C
- Storage Temperature: -20~70°C

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Background

Palert is one of a family of advanced earthquake P-wave alarm detector systems developed by San Lien in Taiwan and represented by Jenlogix in Oceania.

Palert is a P-wave sensor equipped with MEMS accelerometers for 16 bit output resolution. When integrated into a network using SCADA or the dedicated controller, the Palert provides the ability to trigger digital outputs enabling warnings and other actions to occur before or during an earthquake.

With Modbus TCP/RTU capabilities, it is very easy to integrate Palerts with industrial applications, such as PLC, HMI and SCADA. The Palert can stream to 2 hosts and connect to 5 Modbus clients at the same time.

See www.earthquakeearlywarning.systems for more information.

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