

Bridge Seismic Force Monitoring Solution

Load Pin

Industry: Infrastructure

Summary

Customer Challenge

Customer would like to monitor seismic activity that occurs to a bridge by using force sensors and then continuously monitoring bridge forces before, during and after earthquakes occur. Customer would prefer a wireless solution so they would not need to run long cables on the bridge.

Interface Solution

Using Interface's WTSLP Load Pin custom made to fit their needs along Interface's WTS Wireless Telemetry System continuous force monitoring was able to take place without long cables.

Results

Customer was able to monitor continuous loads, log information to the cloud and review information.

Materials

- WTSLP Load Pin
- WTS-AM-1E Acquisition Module
- WTS-BS-4 Industrial Base Station
- Customer's Data Acquisition System
- PC computer with supplied WTS Software
- Solar Panel

How It Works

1. WTSLP Load Pins and the WTS-AM-1E Acquisition Module are installed onto the bridge. The WTS-AM-1E Acquisition Module is installed in a way that will be a clear line of site.
2. WTS-BS-4 Industrial Base Station is connected to the PC computer and installed up to 800 meters of the WTS-AM-1E Acquisition Module.
3. WTS-AM-1E Acquisition Module and Laptop Computer are also connected to a Solar Panel Backup System to ensure continuous operation during power outages.
4. Force is measured by Load Pins and the measurements are transmitted to the WTS-AM-1E Acquisition Module to the WTS-BS-4 Industrial Base Station.
5. The WTS-BS-4 Industrial Base Station receives these measurements and then the data is logged onto the laptop computer. The laptop computer transmits the logged data to the cloud via mobile hot spot.

