

EV's inverter evaluation on driving test

Application Overview

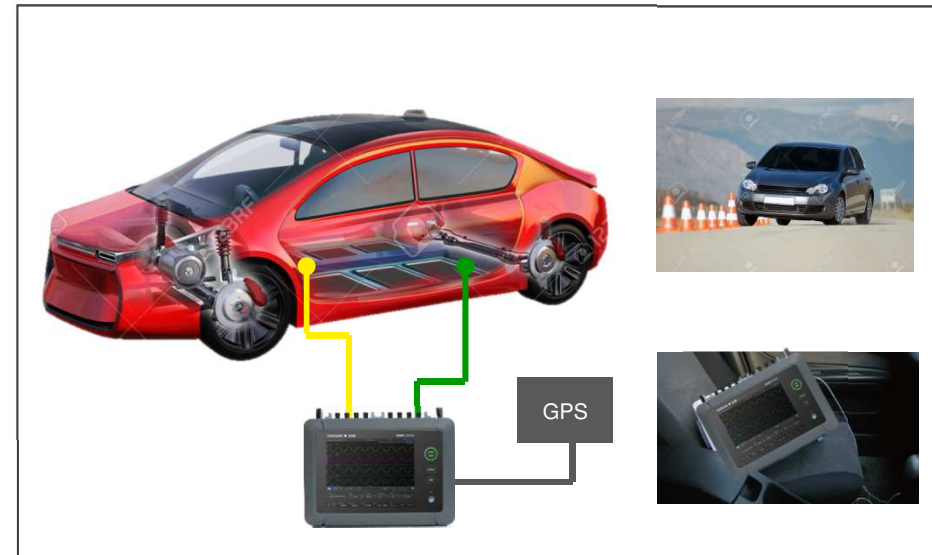
Evaluate EV/PHV's inverter by measuring inverter Input / Output voltage, acceleration with speed and braking rate translated by CAN communication during the driving test.

Customer's issues, requirements

- ◆ Inverter evaluation with CAN bus data
 - Voltage, Acceleration, Speed/Braking rate by CAN
- ◆ Real-time and continuous recording
- ◆ Compact and light weight for driving test
- ◆ Battery powered operation
- ◆ Sync with GPS location

Solution / Customer Benefit

- Up to 2.5 hours continuous recording with 200kS/s into SD card directly, with the 2 channel voltage and CAN communication signal recording.
- A4 size compact design, 3.9kg Weight
- 3 hours battery operation
- Support GPS Time & Location



Power Line monitoring at factories and plants

Application Overview

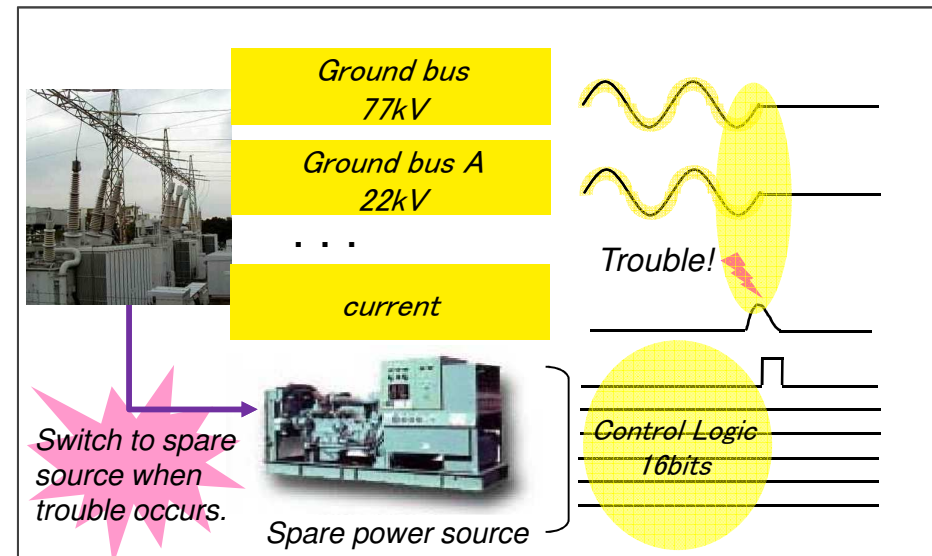
Monitor power line and start record by triggering of sag, surge and interruption.

Solution / Customer Benefit

- Capture sags, surge and interruption
- Isolated input up to 1kVrms, 1.4kVpeak
- Save the waveform and send a notification email automatically in case of a triggered even
- A4 size compact design, 3.9kg Weight
- 3 hours battery operation
- Harmonic Analysis

Customer's issues, requirements

- ◆ Capture the power line sag, surge and interruption.
- ◆ High voltage direct input up to 1kVrms
- ◆ Save the waveform and send a notification email automatically when trouble occurred
- ◆ Compact and light weight to carry
- ◆ Battery powered operation



Industrial Robot Maintenance

Application Overview

Maintain the industrial robot at factory and troubleshoot the problem.

Customer's issues, requirements

- ◆ Record the speed, torque and control signal of servomotors at the same time.
- ◆ Record the vibration and perform FFT to identify the potential failure
- ◆ Compact and light weight for driving test
- ◆ Remote control for safety

Solution / Customer Benefit

- record the speed and torque values (voltage-converted) and control signal of servomotors
- The vibration data measured with acceleration sensor and perform FFT analysis to identify potential failures in machines or components.
- A4 size compact design, 3.9kg Weight
- 3 hours battery operation



- Acceleration
- Voltage/Current
- Speed
- Torque
- Control Signals

Automotive Driving Test

Application Overview

Test automotive at test course and record vibration, temperature with GPS location.

Customer's issues, requirements

- ◆ Record vibration, temperature
- ◆ Real-time and continuous recording
- ◆ Compact and light weight for driving test
- ◆ Easy to use for the recorder user
- ◆ Battery powered operation
- ◆ Sync with GPS location

Solution / Customer Benefit

- Real-time recording with 200M points memory.
- Recorder mode for the recorder users
- A4 size compact design, 3.9kg Weight
- 3 hours battery operation
- Support GPS Time & Location



- Acceleration
- Temperature
- Voltage/Current
- Speed
- Control Signals
- GPS

Solar Panel PV Inverter Test

Application Overview

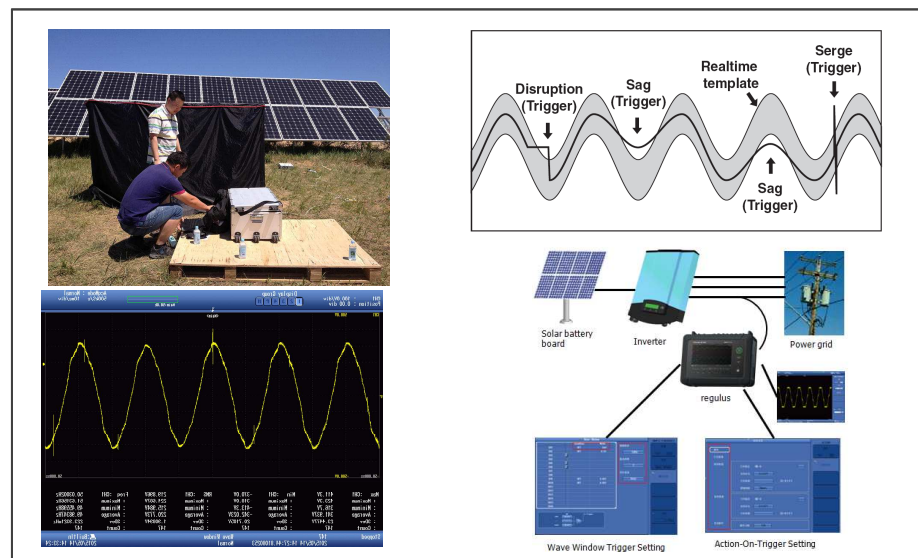
Monitor the voltage and frequency when the solar power inverter transmits power to the grid. Monitor effectively the power grid phenomena such as over voltage, under voltage, over frequency and under frequency .

Customer's issues, requirements

- ◆ At least 8CH
- ◆ Power and harmonics analysis.
- ◆ Power parameter trend monitoring.
- ◆ Power grid phenomena capturing
- ◆ 1MS/s sampling rate.
- ◆ Battery operation, 8 hours with backup batteries

Solution / Customer Benefit

- 8ch for voltage / current
- 1MS/s sampling rate
- Wave window trigger to detect sag, surge
- Harmonic Analysis
- 8.4" Touch screen
- A4 size compact design, 3.9kg Weight
- 3 hours battery operation, extra pack available



The figure illustrates the test setup and the power grid phenomena being monitored. It includes a photograph of a technician in a field setting up the measurement equipment near solar panels. A waveform diagram shows a sine wave with various anomalies labeled: Disruption (Trigger), Sag (Trigger), Realtime template, and Surge (Trigger). Below the waveform is a block diagram of the system: Solar battery board connected to an Inverter, which is connected to a Power grid. A regulus device is connected to the inverter and the power grid, and is also connected to a computer for configuration. The computer screen shows 'Wave Window Trigger Setting' and 'Action-On-Trigger Setting'.