

How do I use a scope to measure power quality in a power distribution system?

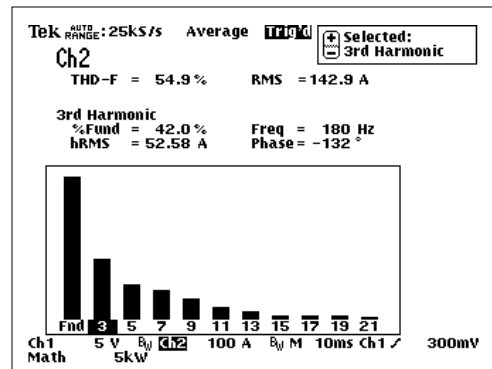
Today's industrial and office environments feature nonlinear equipment attached to power systems, i.e., PWM motor drive systems, electronic lighting, office machines, computers. All this equipment produces excessive harmonics, which can cause transformers and conductors to overheat and circuit breakers to trip intermittently. To troubleshoot these problems you need a tool that can measure and quantify power harmonics.

The problem: Need to measure power harmonics safely and accurately

- Oscilloscopes provide reliable acquisition of voltage and current waveforms, but must have automated harmonics measurement modes
- To ensure safety, the test instruments must be fully isolated from the circuit under test and capable of accepting high voltage and currents

The solution: Make safe power harmonics measurements with the THS720P TekScope®

- Provides a truly isolated instrument to measure power-system voltages and currents
- Provides accurate harmonics analysis
- Helps identify the source of harmonic content



Troubleshooting Tip

Measuring power harmonics with the THS720P

1. Use the P5102 passive voltage probe and the A621 current probe
2. Connect the probes to the power distribution system
3. Select the Harmonics Display function to show the harmonics graph; TekScope automatically calculates a display from the voltage and current information
4. Analyze the relative proportions of the harmonics bar graph

