



GE Power Management Control System

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Technical Note #2

GE Power Management Control System

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63rd Harmonic Waveform Capture Graphs

Subject: Calculation and graphing of harmonics for waveform capture.

Applies To: PMCS 5.0 Waveform Capture w/ EPM 3710, EPM 3720, and Power Leader Meter Note does not apply to PMCS 5.1 and higher.

Please follow the instructions below to calculate and graph harmonics for a waveform capture from an EPM3710, EPM3720, and a manually captured PowerLeader Meter (single cycle, 128 sampling points).

Waveform Capture Harmonic Calculation Instructions

1. From the waveform capture utility, save the waveform that has been captured (single cycle, 128 samples) by using the "save to datafile" button on the toolbar or the drop down file menu.
2. Open the 64harm.xls spreadsheet in Excel.
3. From this spreadsheet open the data file in step one.
4. From the data file copy the waveform current samples to the clipboard. Close the data file.
5. Paste the clipboard information containing the waveform data samples into the column labeled "Input" (column A).
6. From the "Tools" pull down menu select the "data analysis" function. A pop-up window "Data Analysis" will appear. Select "Fourier Analysis" followed by "OK".
7. A pop-up window "Fourier Analysis" appears. In this window for Input Range enter "\$A\$1:\$A\$128". For output options select "Output Range" and enter a range of "\$E\$1:\$E\$128". Select "OK".
8. At the bottom of the spreadsheet observe the calculated RMS-H, THD, harmonic magnitudes up through the 64th, RMS, Peak, and CF values.
9. The harmonics can be plotted using the steps identified in the charting wizard contained within Excel.

Keywords

waveform capture, EPM3710, EPM3720, Power Leader Meter, harmonics

Related Notes

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[Power Leader Meter Waveform Dialog Box](#)

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