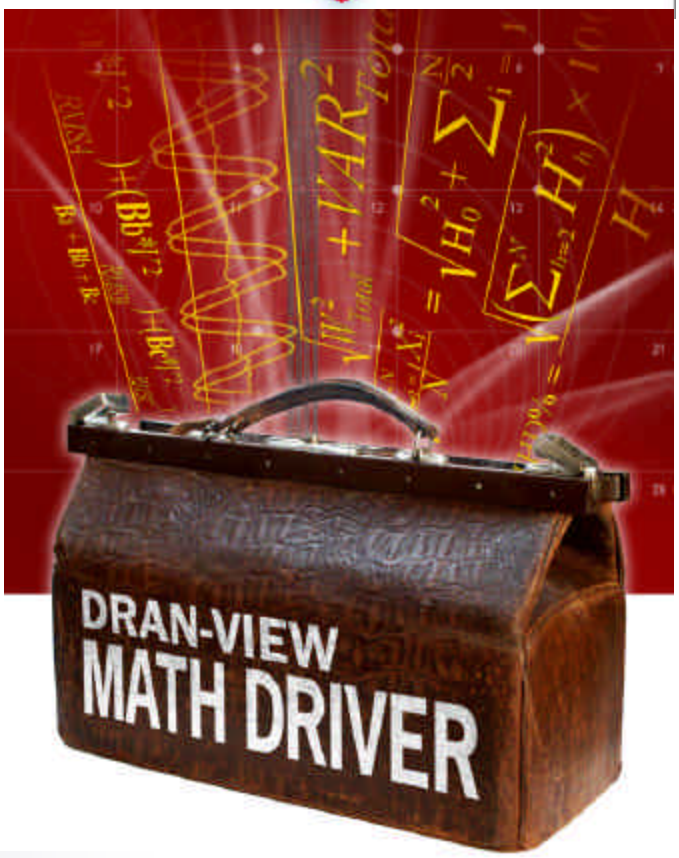
Math-Driver for Dran-View ®

Supercharge your Dran-View 5 with new, cool math features !

In four essential areas, the Math Package will give your measurements a new life.



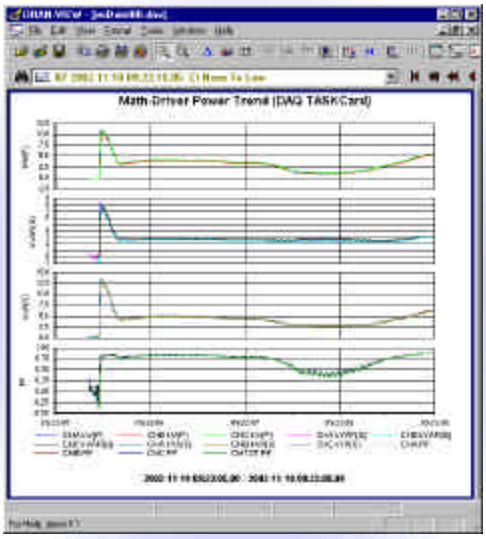
Rescue Kit

Ever hooked up a probe the wrong way? Maybe forgotten to check if the actual time in your instrument is running correctly? Or could you have possibly forgotten to set the correct K-factors?

No Problem ! The Math-Package helps you to correct these errors, re-calculate parameters from available waveform data, invert waveforms and much more.

See functionality chart for details on supported instrumentation.

Improve Measurements/Reports



Calculate additional parameters for your Multi-DAQ TASKCard, fault-recorder/inrush mode measurements

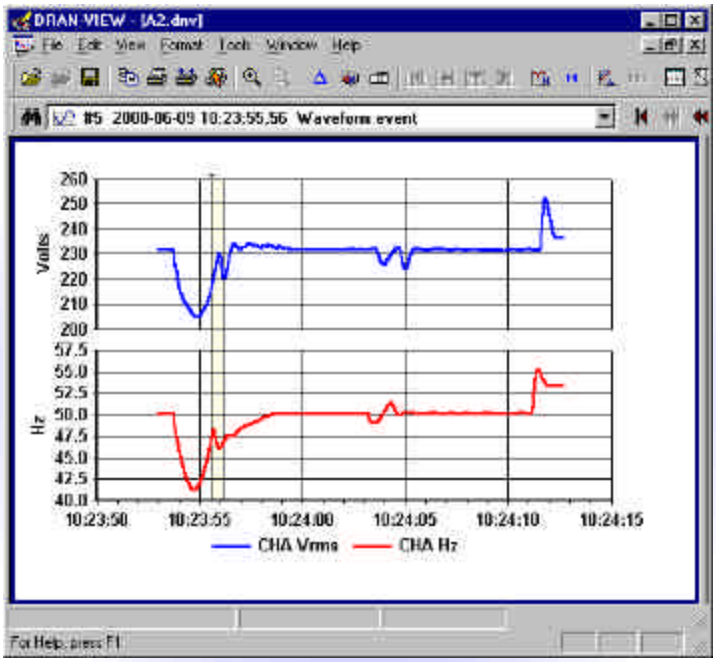
With the Math-Driver the following additional trends will be created for Multi-DAQ data files:

- **Vrms** phase voltages for 3-Phase Delta measurement.
- **Watts**
- **VAR's**
- **VA**
- **True PF**
- **Vthd** (% fundamental)
- **Ithd** (abs current)
- **Voltage Frequency** (for internal trigg)
- **NET TOTALS** Vrms, Amps ,W ,VAR ,VA

The points in the time-plot trend are calculated at every half-cycle increment of the waveform data.

The measurement to the right shows the frequency variation during a generator startup, measured with the Multi-DAQ TASKCard and post-processed using Dran-View's Math-Driver.

This capability is of great value for evaluating the performance of power mitigation equipment in the field, on test beds, and within commercial or industrial facilities.



Generate more parameters from waveform data

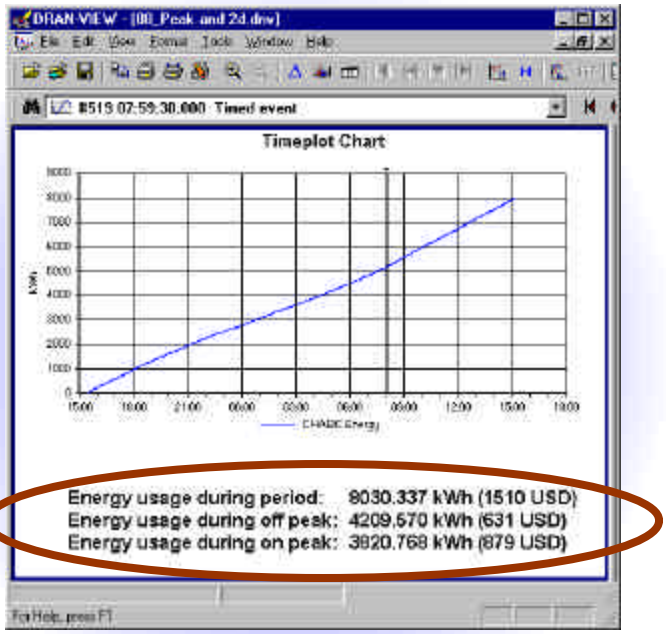
This feature makes it possible to populate the time-plot graphs with additional points by calculating them from waveform data. Since some events generated by the PQPlus and PQLite TASKCards do not produce the full range of time-plot parameters, this new feature will enable you to produce these detailed time-plots.

Showing Displacement Power Factor (DPF) instead of K-factor.

For the PQPlus and PQLite TASKCards it is now possible to calculate DPF instead of the K-Factor parameter, using Dran-View's Math-Driver.

Rename Inputs

This feature makes it possible to measure and display any parameter and unit for the voltage or current channels. As an example, you may want to use channel D for temperature readings to correlate process and power parameters.



Energy ON/OFF Peak Calculations

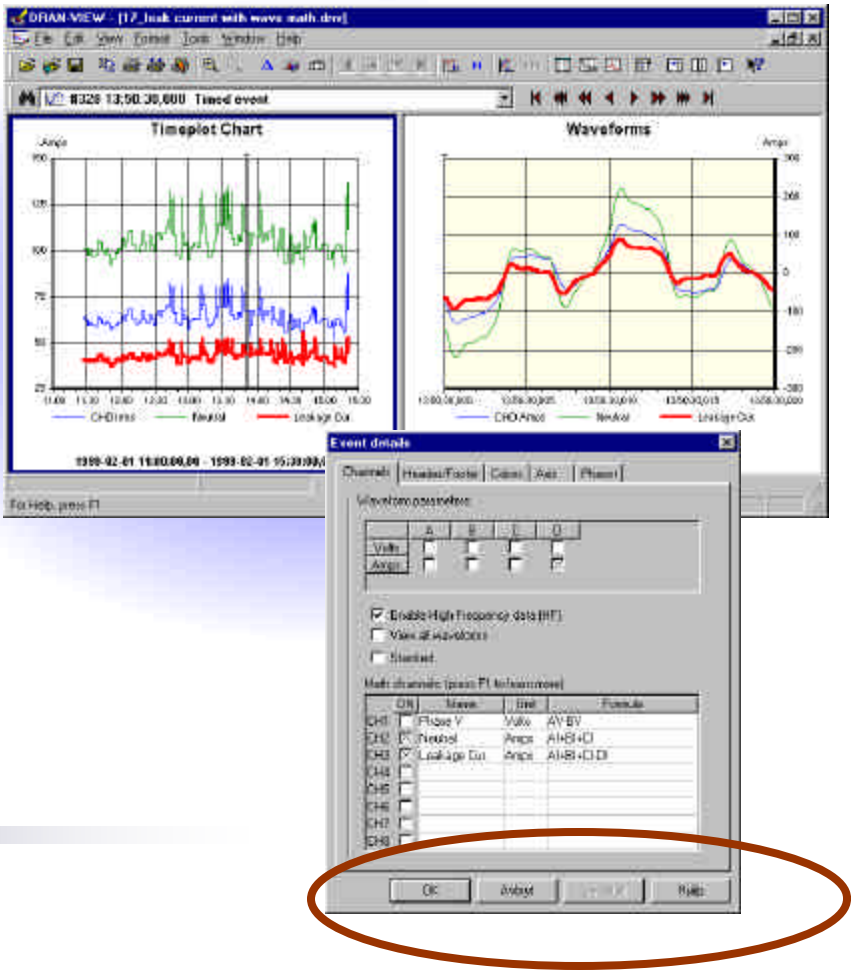
Calculate and display on-peak and off-peak energy. You may specify individual on- and off-peak periods for any day of the week and also calculate the cost in any currency.

Formulas

Mathematical expressions and formulas can be used to plot additional **user-defined channels** within both the time-plot chart and the waveform chart. The formulas may contain data series from the measured data, constants, operators and built-in functions.

*In the this example you can observe the calculated **Leakage Current** derived from the formula **AI+BI+CI-DI**, applied to the waveform data points (right window).*

*The **RMS trend** of the leakage current is displayed in the Timeplot chart (left window).*



Advanced Analysis

Symmetrical Components

Symmetrical components may be useful for determining the directivity of a sag (upstream or downstream fault), and also assist in determining the piece of equipment that caused the disturbance. The Math-Driver provides you with the means to derive intelligent conclusions, since the negative, positive and zero-sequence curves "fingerprints" the source of the problem.

Evaluation of measuring results involving non-symmetrical voltages and currents often requires the use of symmetrical components. Important effects on different kinds of equipment and systems can be evaluated and explained using symmetrical components, i.e. the losses in three-phase motors and generators are totally different if the voltages are not symmetrical.

The Math-Driver provides symmetrical components up to the 50'th harmonic and. The time-plot trends are displayed in absolute values, percentage of positive sequence components or percentage of positive sequence fundamental.

Watt harmonics

The Math Driver also provides time-plots of Watts Harmonics up to the 50'th harmonic.

Math-Driver Functionality Chart

	Multi-DAQ	*Signature System*	*BMI through PES*	*PQ-Lite*	*PQ-Plus*	*TASKCard 808*	*TASKCard/8000 Motor Inrush*	*Dranetz 658*	*Dranetz 8000-2*
Rescue kit									
Invert waveforms									N/A
Time adjustment									
Post Measurement Scale-Factor Adjustment									N/A
Improve Measurements/Reports									
Calculate more parameters for Fault-recorder/Inrush mode measurements									N/A
Generate more parameters from waveform data									N/A
Show DPF instead of K-factor								N/A	N/A
Energy on-peak/off-peak calculations								N/A	
Rename inputs									
Formulas									
Mathematical expressions/formulas									
Advanced Analysis									
Symmetrical components									
Watt harmonics								N/A	

□ = *Available using Math-Driver*

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