Records Viewer

Brief Characteristics

- viewer of records from ELVAC RTUs,
- easy analysis of failures (short circuits, overcurrents, earth faults),
- analysis of the behavior of protections and signaling,
- automatic detection of the type of record (according to the type of unit),
- display of waveforms with the instantaneous voltage and current value,
- display of waveforms with effective voltage and current values,
- calculation and display of waveforms of instantaneous and effective values I_0, U_0,
- calculation and display of waveforms of instantaneous and effective values of harmonic I_0, U_0,
- display of phase diagrams,
- calculation and display of the time waveform of angle φ_0,
- change of the scale on the timeline, timestamps (real time),
- export of records (formats CSV and COMTRADE),
- demo mode for testing.

Basic Description

The Records viewer displays the time waveforms of the measured values, calculated values and flags of protections, indicators of fail currents and the automatics generated by the ELVAC RTU series.

This enables a fast analysis of failure states, such earth fault, short circuits and overcurrents. This SW can be used with an advantage during the verification of the correct function of the newly installed devices, e.g. for checking the phase sequence.

The main window of the application is divided into three parts:

- the first and second panel contain the waveforms of three-phase measurements of the voltages or currents (combination of 3V+3I, 6V, 6I according to the RTU configuration),
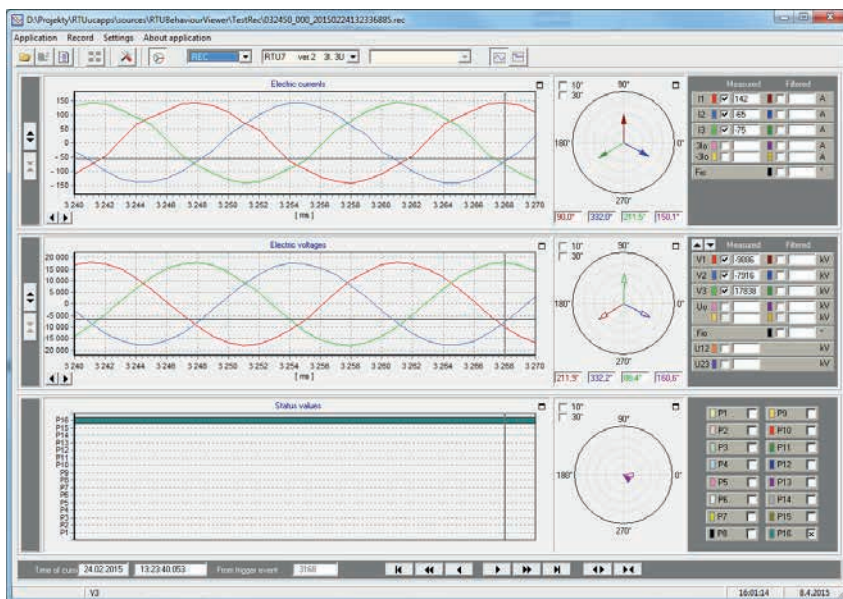- in the third panel are timelines for individual protection flags, the reasons for running the records.

In the first two panels is possible to display the waveforms of instantaneous values of three-phase measurements of the voltages or currents. The values can also be displayed in the form of phasor diagrams.

In addition, it is possible to switch display into the mode with timeline of the effective values of three-phase measurements. Instantaneous and effective values I_0 and U_0 and the first harmonic I_0 and U_0 are calculated. There can also be displayed timeline of the angle φ_0, which is also calculated.

The displaying of individual waveforms can be enabled or disabled using the check boxes next to both panels. In this area, all the values are displayed depending on the position of the cursor in the graphs.

Third panel shows the protection flags, flags for signaling of the protection activation, status of the power element etc. It is possible to detect the reason of running the record and the protection activation. The meaning of each flag is displayed using the tooltip.

In ELVAC RTU series, the waveforms are recorded typically 300 ms before the trigger event. The trigger event is displayed on all three panels. The records also include the timestamps (real time). On the timeline, it is possible to change the scale and it is possible to scroll fluently through the records.

The Records viewer enables to export data in several formats for use in further applications – with respect to the option of analysis of the records from ELVAC RTUs in third parties SW, where the COMTRADE format is especially important.