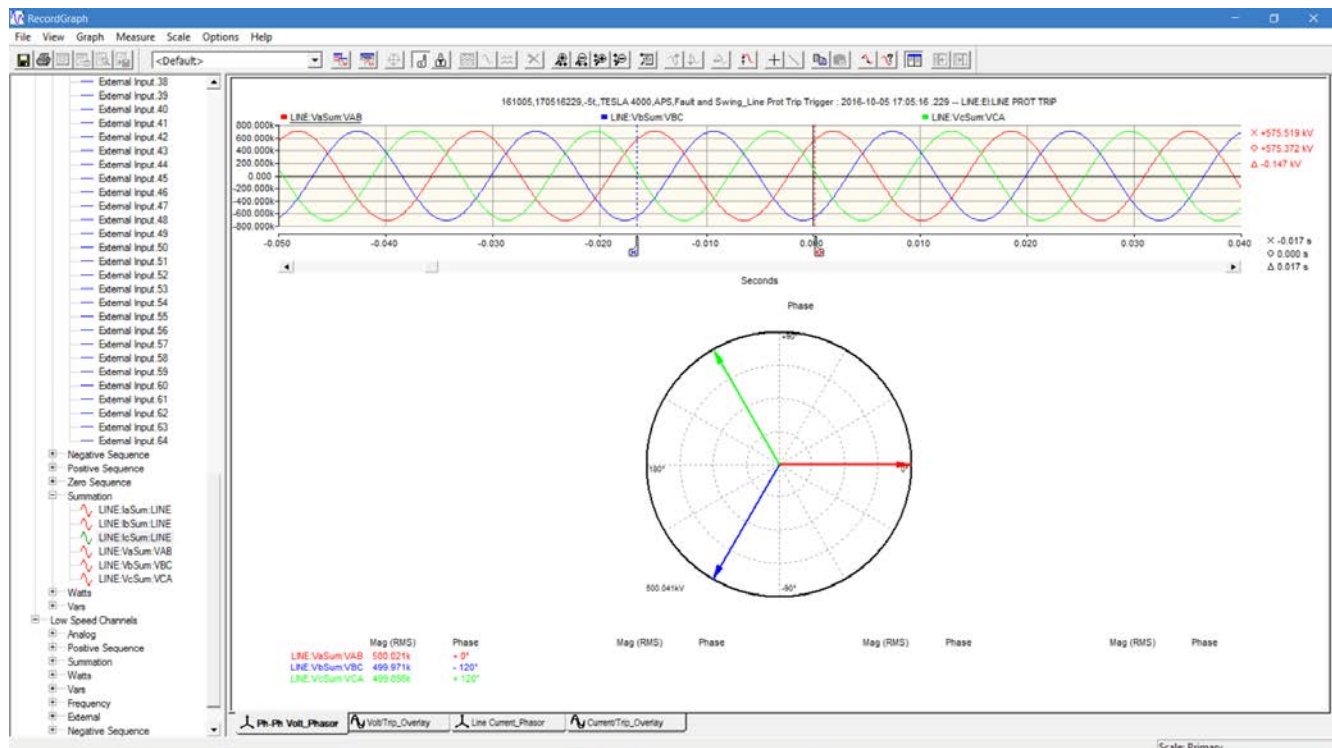# RecordGraph Template Application Note

Objective

This app note demonstrates how to use templates on RecordGraph and the benefits of applying them in analysis of B-PRO, F-PRO, L-PRO, T-PRO, TESLA records and COMTRADE files. The concept is to re-use view layout configurations from previous record analysis, updating data information with the new recorded channels, thus reducing graph re-creation processing time.

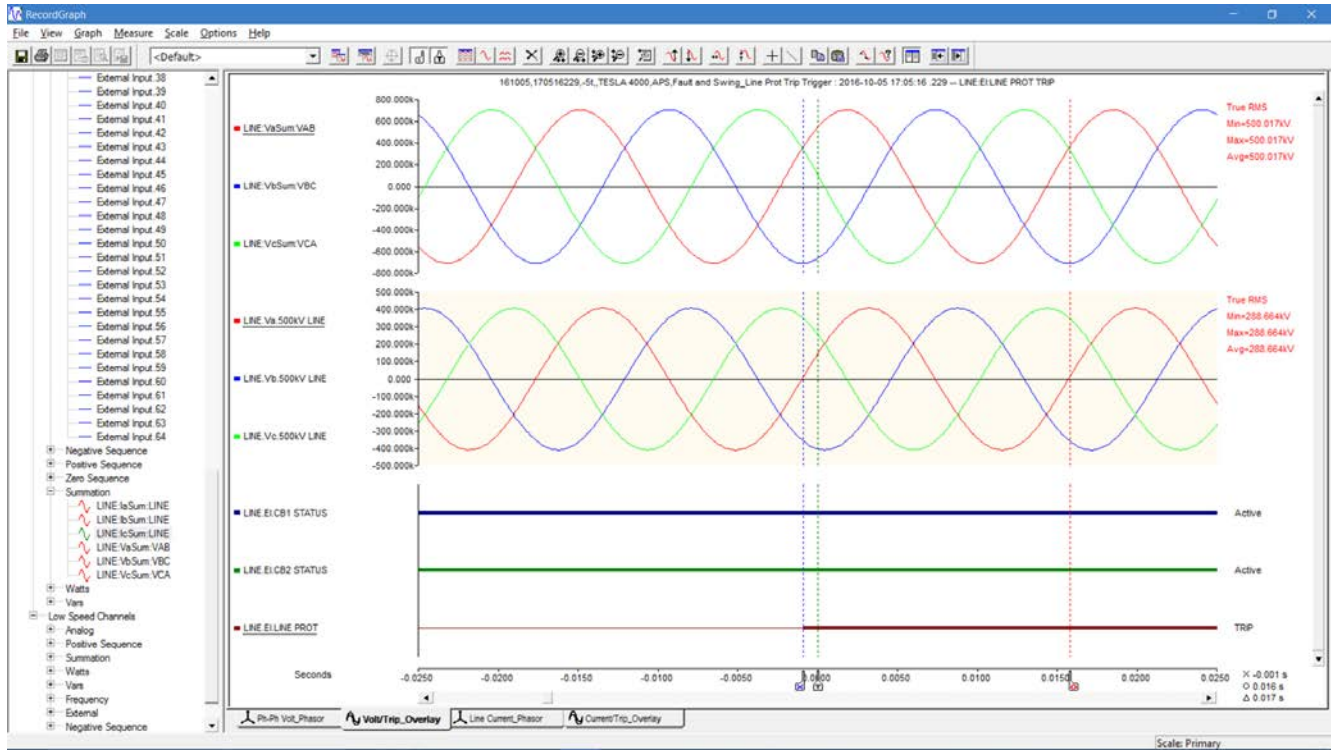## Creating a Template from RecordGraph's View screens

For this example, the following View screens were created from a TESLA record, which shows line protection tripping a 500kV transmission line in a breaker and a half configuration:

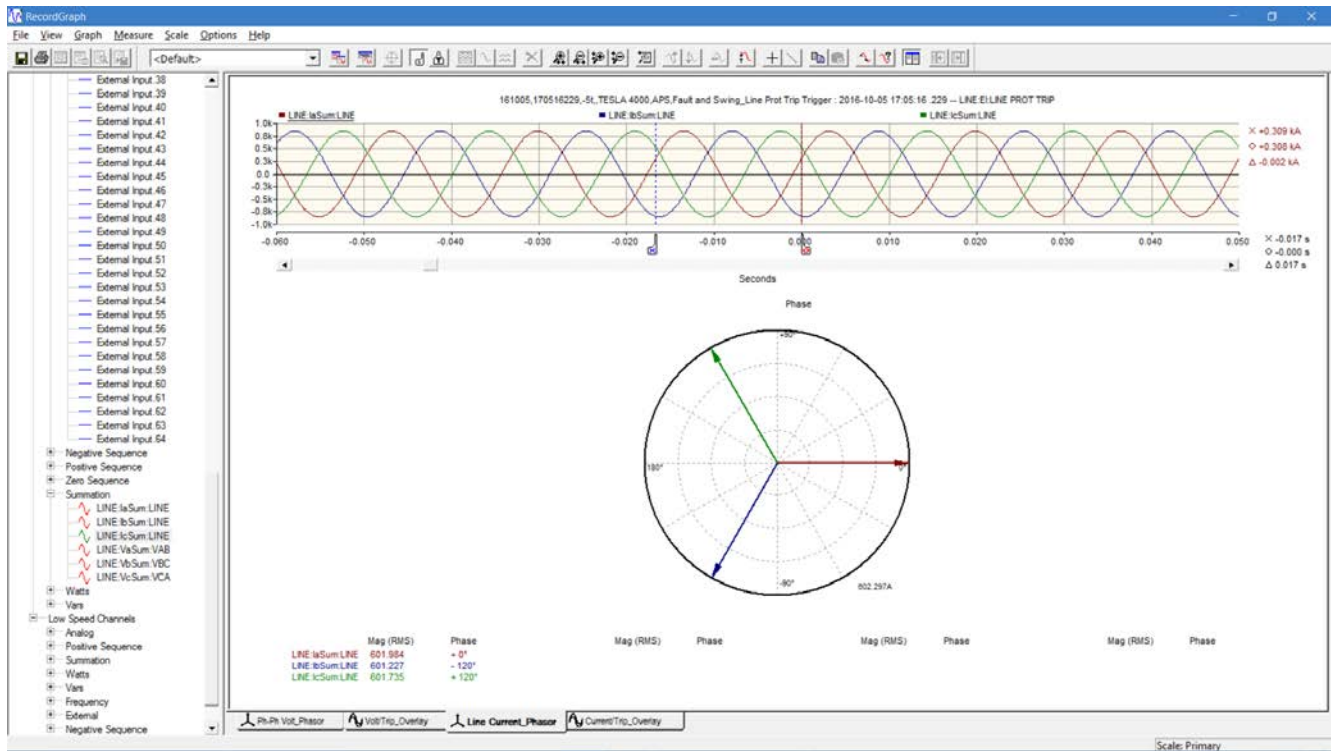### Phasor View screen: showing phase-phase voltage quantities

In addition, instantaneous primary measurements for voltage AB (in red), as per markers' positions, are shown in the top right corner. RMS voltage values for all three phase-phase voltages are shown in the bottom left corner.

Overlay View screen: showing phase-phase voltage quantities, phase-neutral voltage quantities and trips (external inputs)
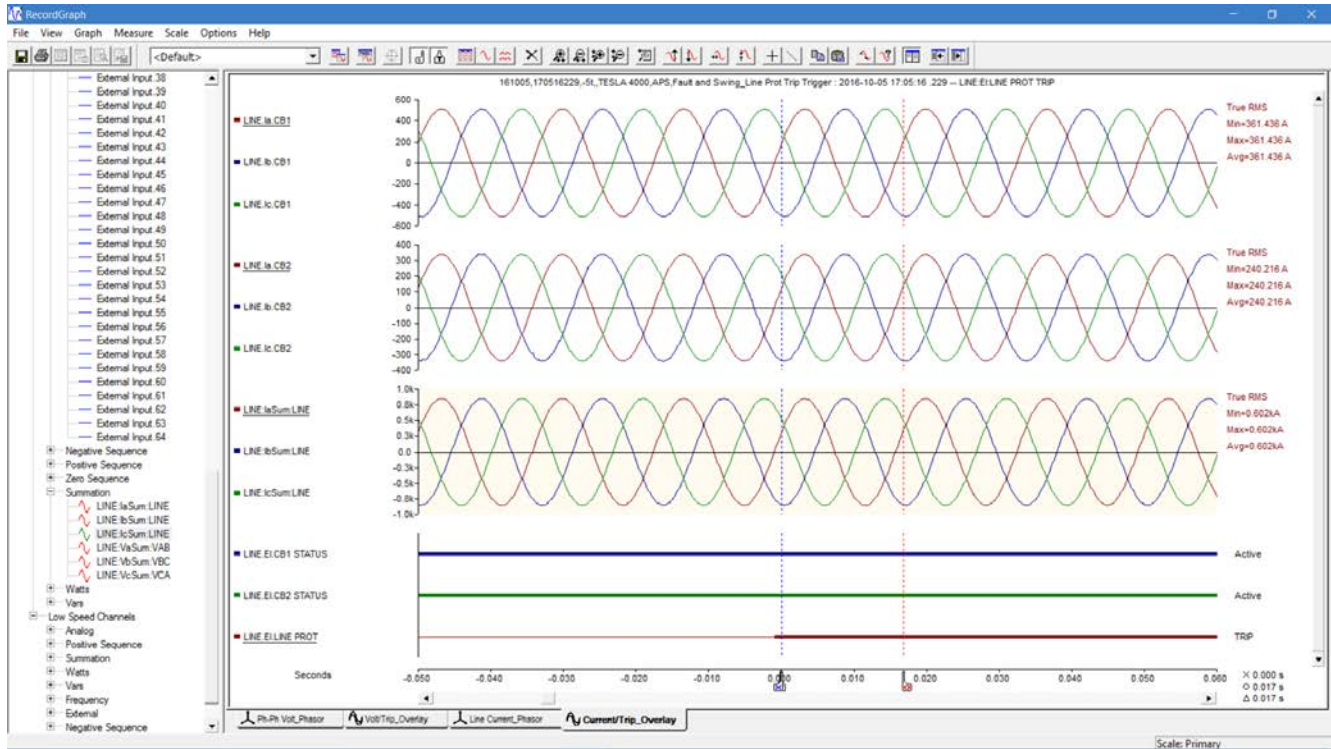

In addition, true RMS phase-phase (for AB voltage) and phase-neutral (for phase A voltage) primary measurements (in red), as per markers' positions, are shown in the top right corner. Record time reference (in black), as per markers' positions, are also shown in the bottom right corner.

Phasor View screen: showing line current quantities

In addition, instantaneous line current measurements for phase A (in red), as per markers' positions, are shown in the top right corner. RMS line current values for all three phases are shown in the bottom left corner.
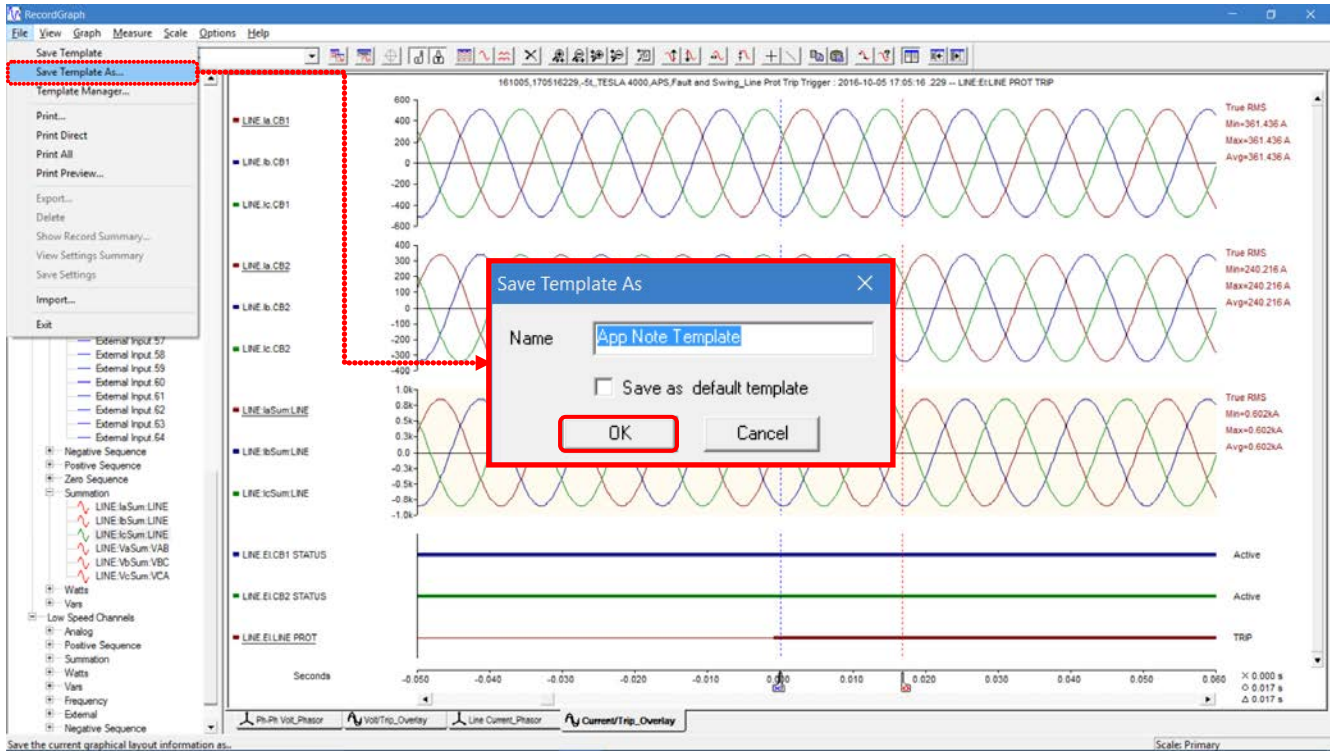
Overlay View screen: showing line current quantities, Circuit Breakers' currents' quantities and trips (external inputs)
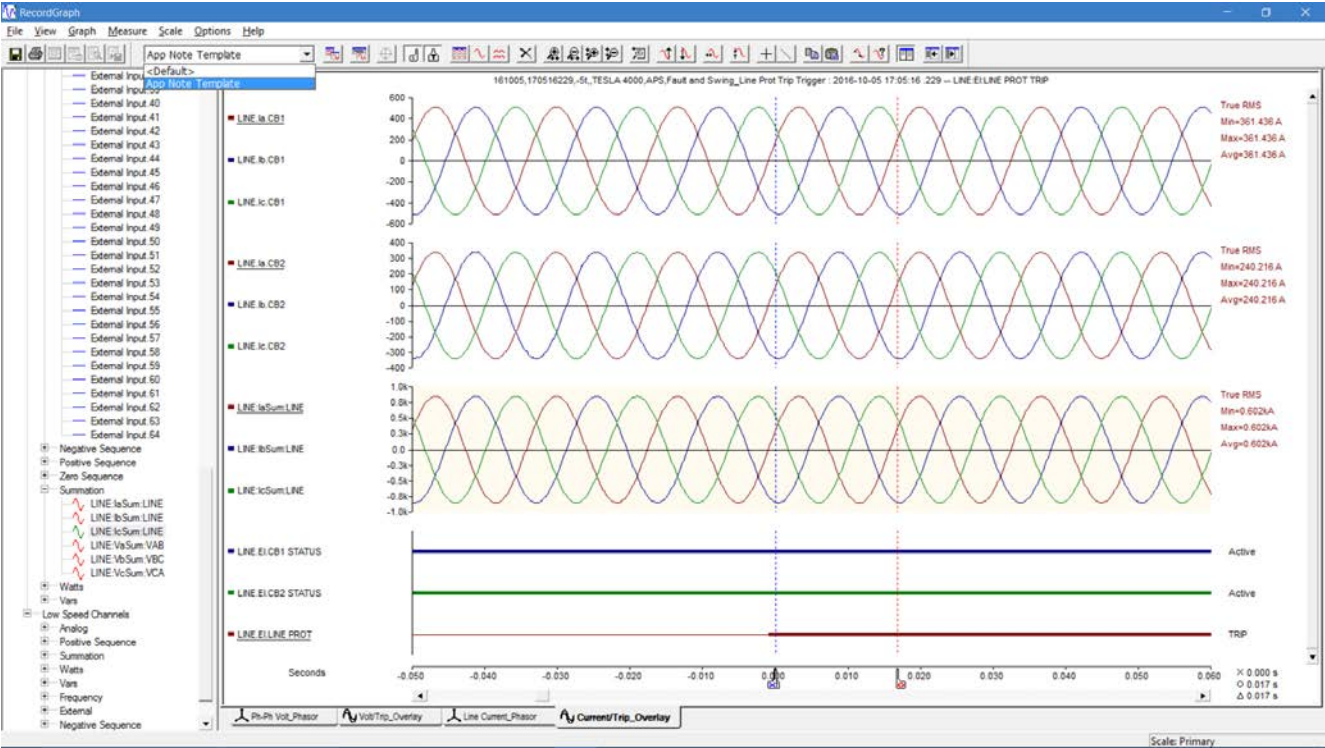

In addition, true RMS line current, Circuit Breaker #1 current and Circuit Breaker #1 current primary measurements for phase A voltage (in red), as per markers' positions, are shown in the right hand side. Record time reference (in black), as per markers' positions, are also shown in the bottom right corner.

As shown below, to create a Template with all configured View screens:
- Go to 'File > Save Template as'
- Give the template a meaningful name
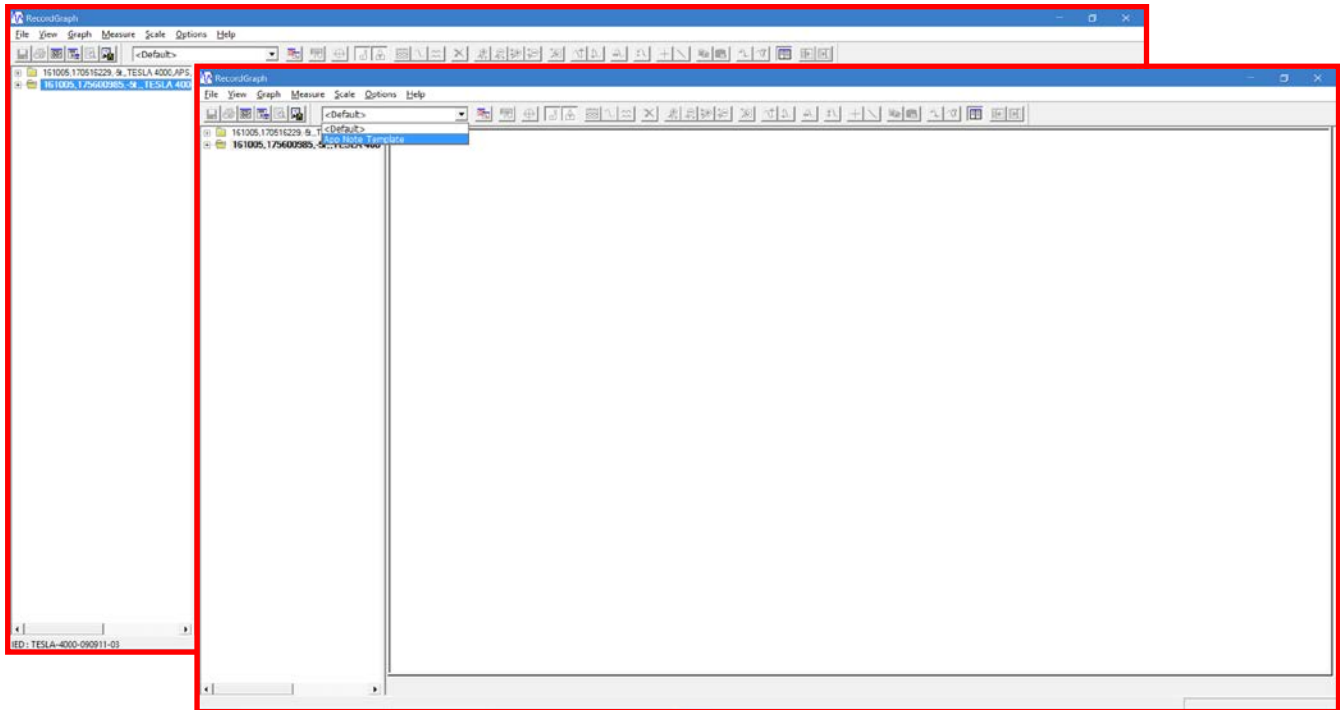- Click "OK" to save the template

After being saved, the template will available in the template list box, as shown below:
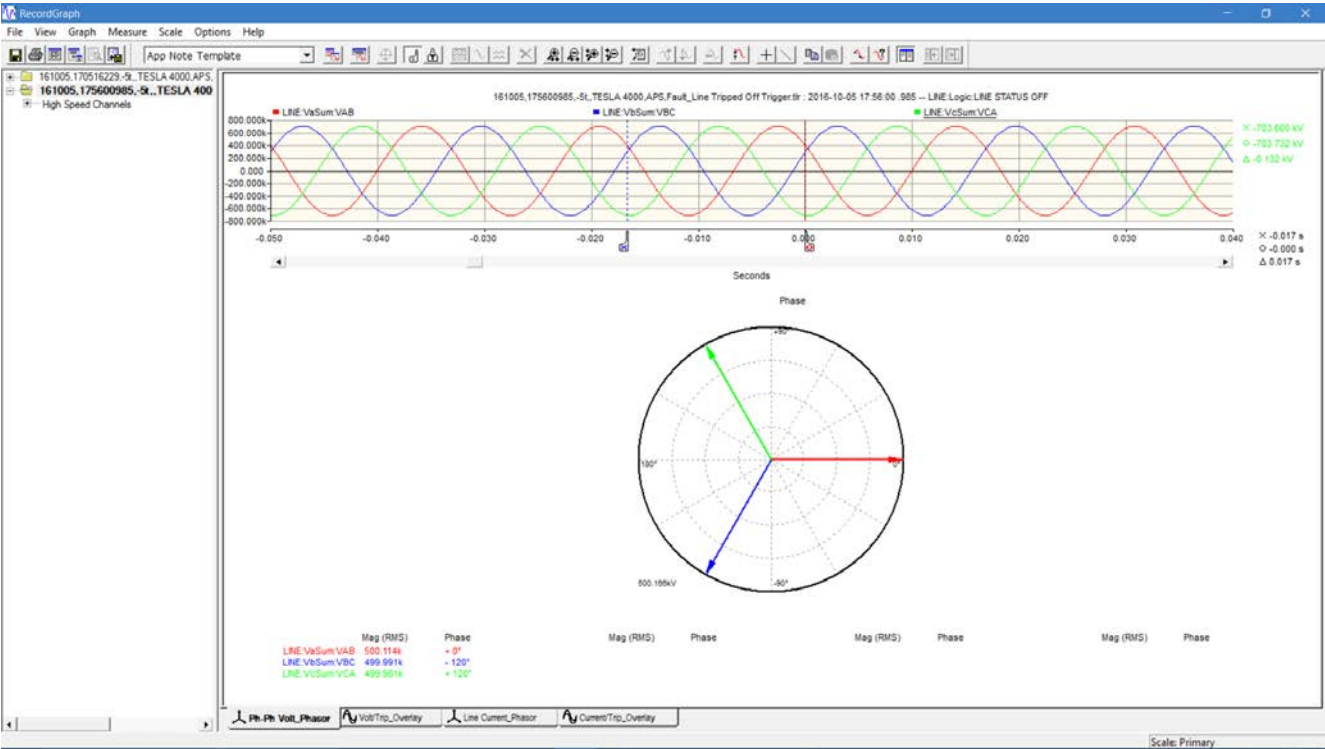
Applying a created Template

To use any created template, import a new record to RecordGraph and then, choose the template to be used to analyze the record from the template list box.
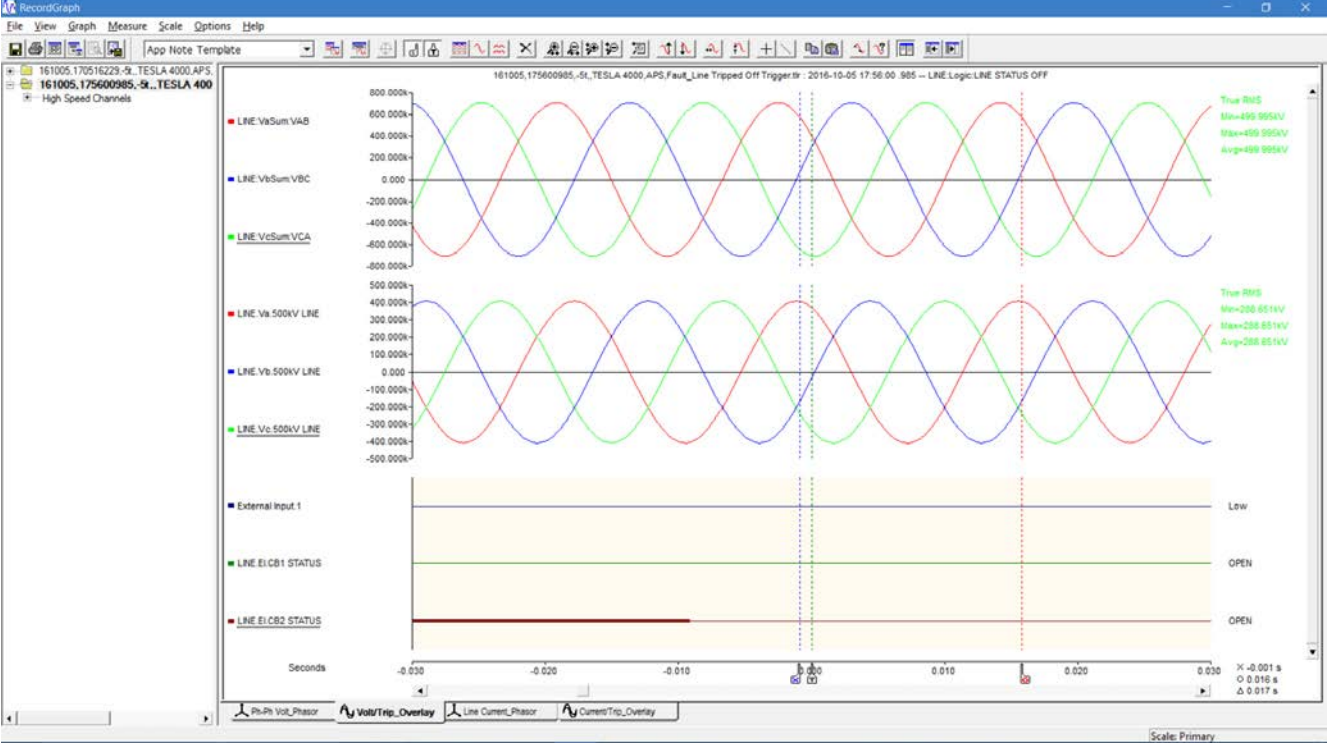
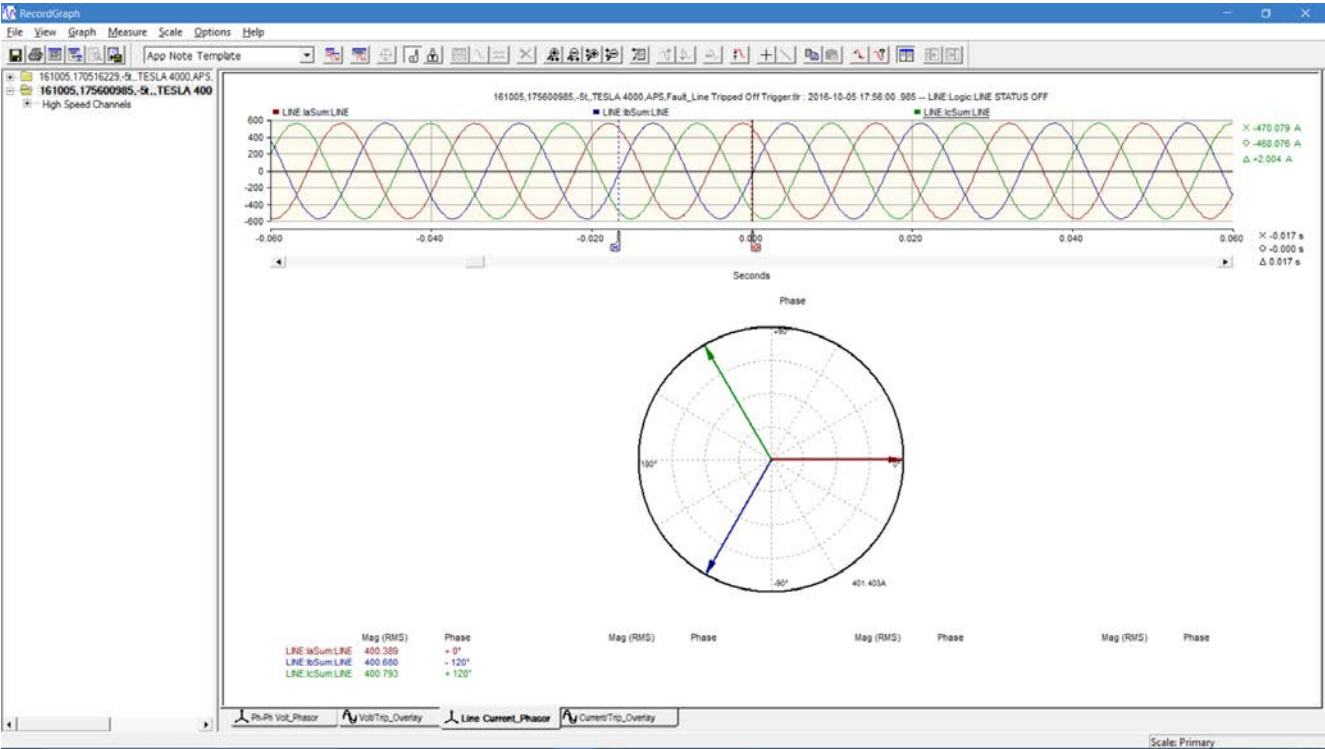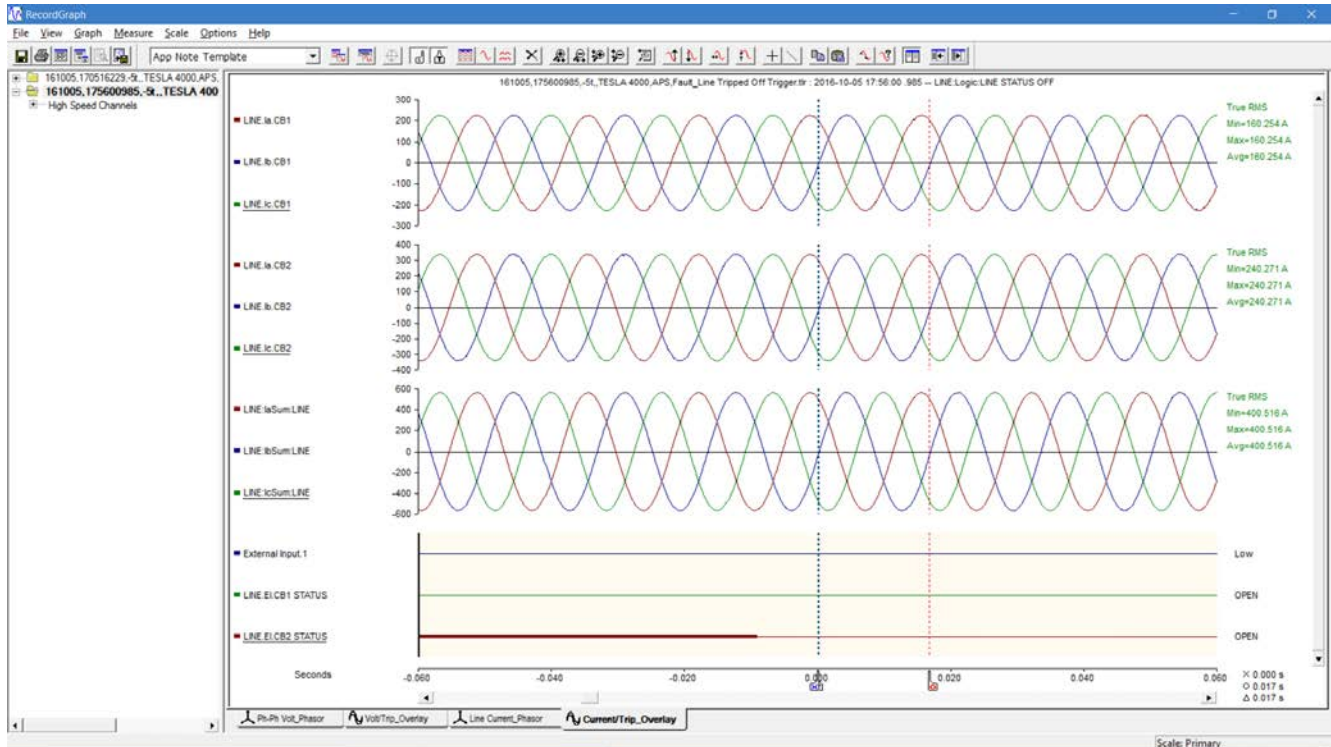# Phasor View screen: showing phase-phase voltage quantities

Overlay View screen: showing phase-phase voltage quantities, phase-neutral voltage quantities and trips (external inputs)

Phasor View screen: showing line current quantities

Overlay View screen: showing line current quantities, Circuit Breakers' currents' quantities and trips (external inputs)
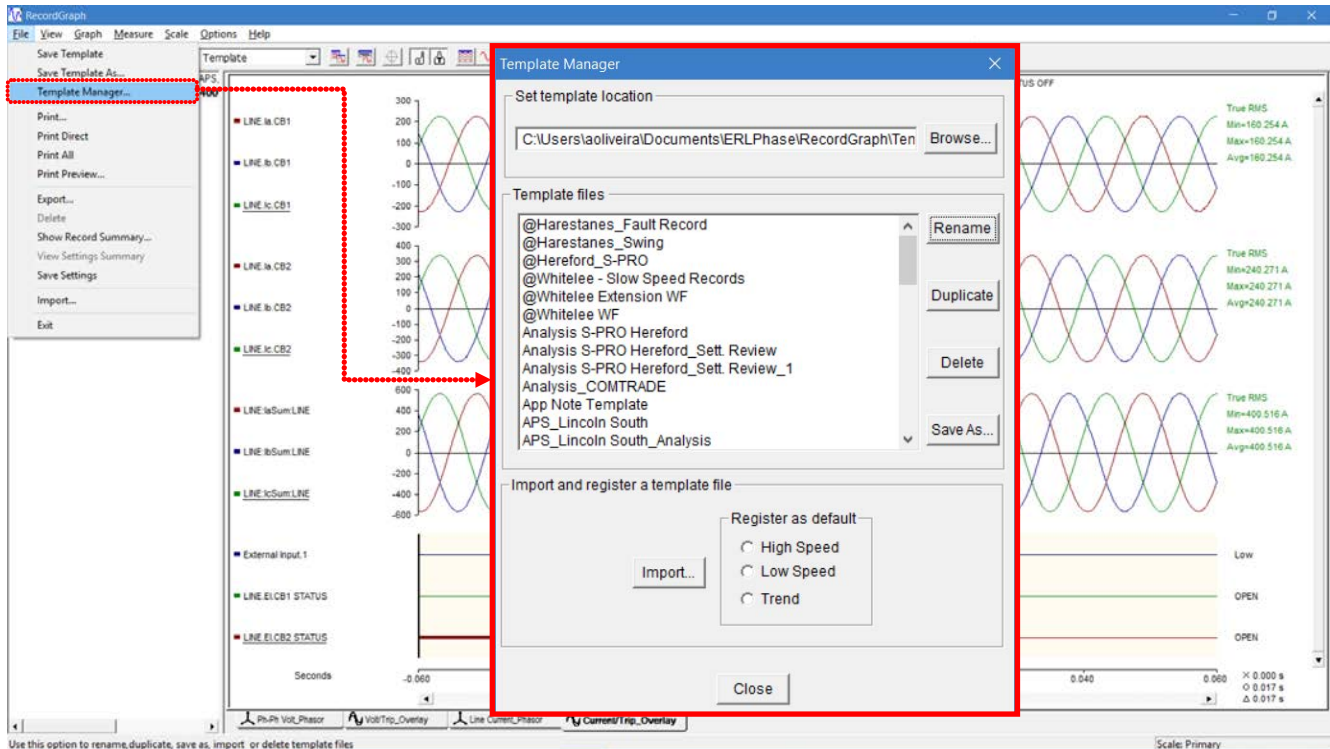

Please note that all View tabs' names, zoom levels, trip marker's position, markers positions and metering information are kept. As long as the source record (or COMTRATE file) has a common framework, all View screens will be presented as configured in the template previously created and applied.

- Views – graphs and their location along with the traces (channels)
- Markers position (X, O and trigger marker, T)
- Views and graphs title options
- X axis scaling (zooming information)
- Y axis scaling (zooming information)
- X axis shift (time alignment) of each channel
- Measurement (readout) options
- Left Margin

Templates are matched based on IED (serial number) in the case of TESLA recorders. Therefore, if templates for a TESLA recorder are created and stored (for example, with serial number TESLA-2000-981103-07), these templates cannot be applied to another recorder with a different serial number. Conversely, templates are common in case of use by relay products such as B-PRO, F-PRO, L-PRO and T-PRO.

Managing Templates

As shown below, to manage all templates stored in the user's computer, go to 'File > Template Manager…' to bring up the 'Template Manager' window.

Using the Template Manager, the user can:

- 'Set template location': to choose a different directory to store templates on the user's computer
- 'Rename', 'Duplicate' and 'Delete' any template file
- 'Save as': to share any template with other users
- 'Register as default': to set a different template as a default for units based on IED (serial number) in the case of TESLA recorders and other relay products
- 'Import': to use a template shared by another user

If you need any further assistance,
please contact

ERLPhase Customer Service at **+1 204-477-0591**

Or

support@erlphase.com