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Data Sheet 5.61-3/1¹⁾

Software Package for Arrester Test, Type HiRES IAS ARR

General

For arrester testing with impulse current and/or AC voltage, dividers and measuring equipment are necessary. The HiRES measuring system will be used for comfortable measurements. In case of simultaneous measuring of alternating voltage and current an additional MIA BSP on high-voltage potential will be used for recording. The HiRES measuring hardware is controlled by the impulse analyzer software IAS (main software). The arrester test application is especially designed for arrester testing and the simultaneous handling of two recorders.

IAS ARR is prepared to perform measurements on arresters using impulse current generators plus optionally applied AC voltage.

This application in conjunction with the impulse current generator and optionally an AC voltage generator enables you to perform the following tests:

- Residual Voltage Measurement
- Reference Voltage Measurement (requires AC high voltage source)
- Conditioning (requires AC high voltage source)
- Operating Duty Test (requires AC high voltage source)

All tests, except Residual Voltage Measurement, have to be performed using the HIGHVOLT control system HiCOS for automation.

Software requirements

HiRES IAS ARR is an additional package for the main software HIRES IAS (see Data Sheet 5.61-1). All functions of the main module are available.

You will need the HIGHVOLT Control System HiCOS to get the full functionality of this application.

¹⁾ The prior version of the Data Sheet was 5.62-2/2.

User interface

The user philosophy is to put in only the necessary test parameters. Whereas the left side of the display shows the recorded wave shapes, the right side is provided to set the measuring parameters in one setup dialog, such as peak current, voltage, polarity, time deflection, undershoot. The software controls the related internal functions and settings.

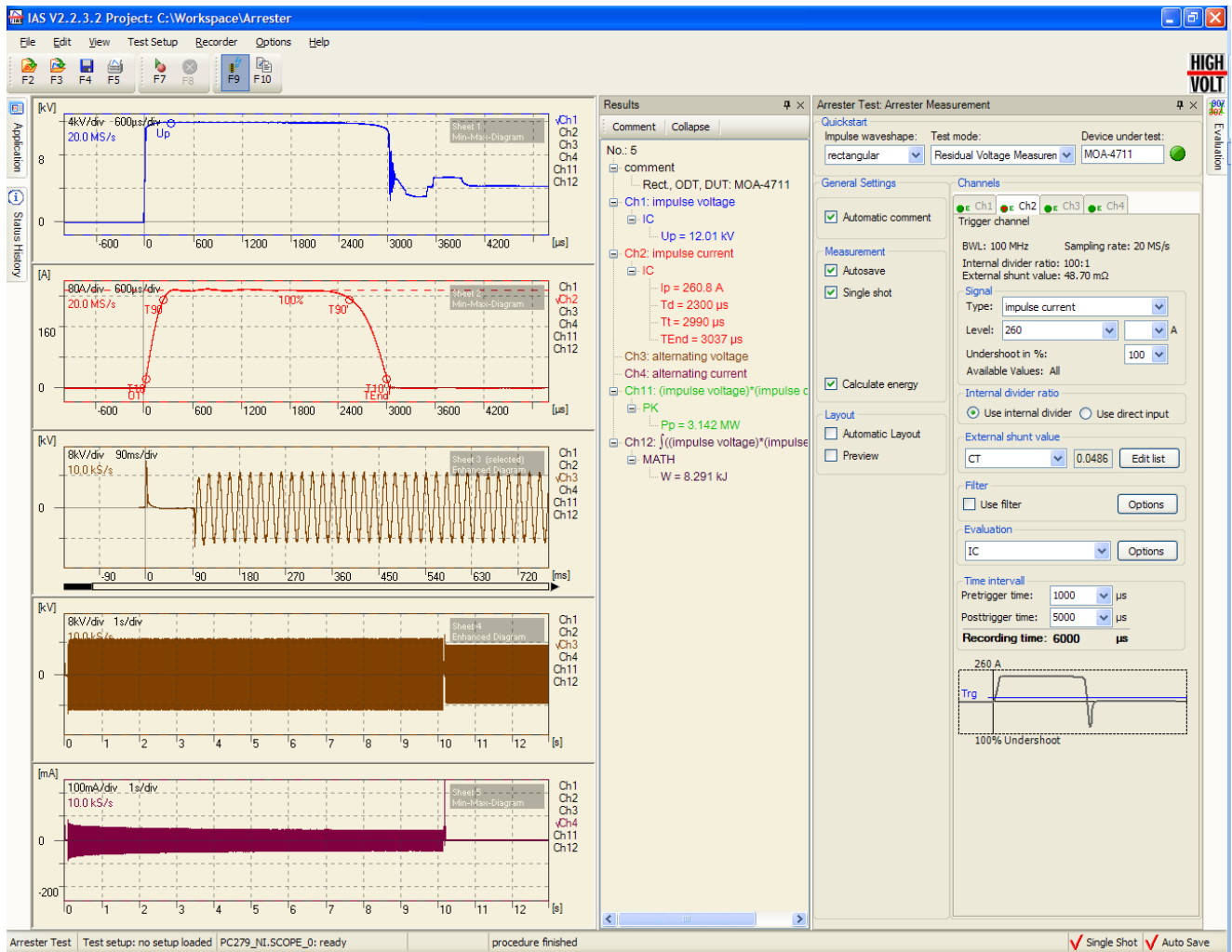


Figure 1: Screenshot of HiRES IAS ARR, measurement

Quick start and parameter display

Short cuts and quick start functions on the upper side of the display are available for selected parameters:

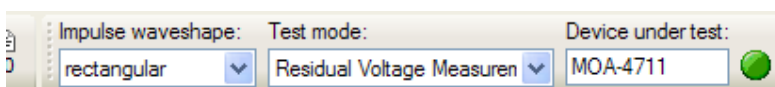


Figure 2: Detail of IAS arrester test application

Analyzing features

Additionally to the standard evaluation methods the following functions are available:

- Impulse Current Evaluation (IC) according to relevant IEC standards
- Alternating Voltage and Current Evaluation (AC)

Automatic evaluations for channels can be selected and will be performed after recording. Also the energy of the impulse can be calculated automatically by the following formula:

$$\int (Ch1 * Ch2) dt$$

Evaluated parameters are shown in the results window (typically on the right side of the display). During tests with continuously recorded alternating voltage and current you are able to watch the waveform currently recorded as with an oscilloscope.

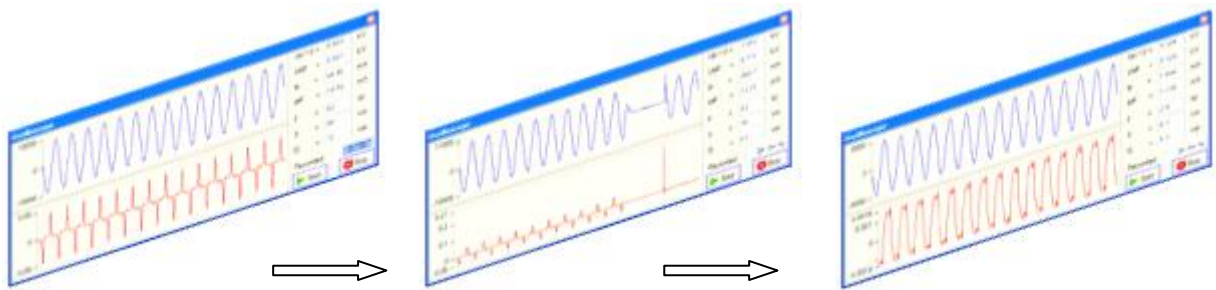


Figure 3: Continuous monitoring of voltage and current

During continuous recording of AC voltage and current an envelope is generated which is shown after the recording had been stopped.

In interaction with HiRES IAS ARR, the HIGHVOLT Control System HiCOS will periodically collect the current values and will display the progression in a chart.

Report generator

- Create your report as MS-Word document
- Select the curves for your report freely or filter them by type of evaluation
- Record preview
- Select the columns for your summary table (Peak voltage, peak current, T1, T2, ...)
- Use a MS-Word document as template
- Adjust the no. of pictures per page

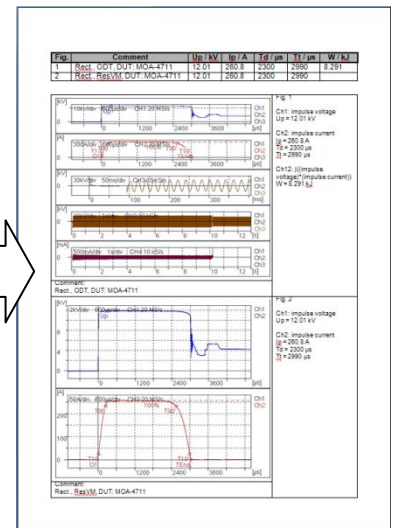
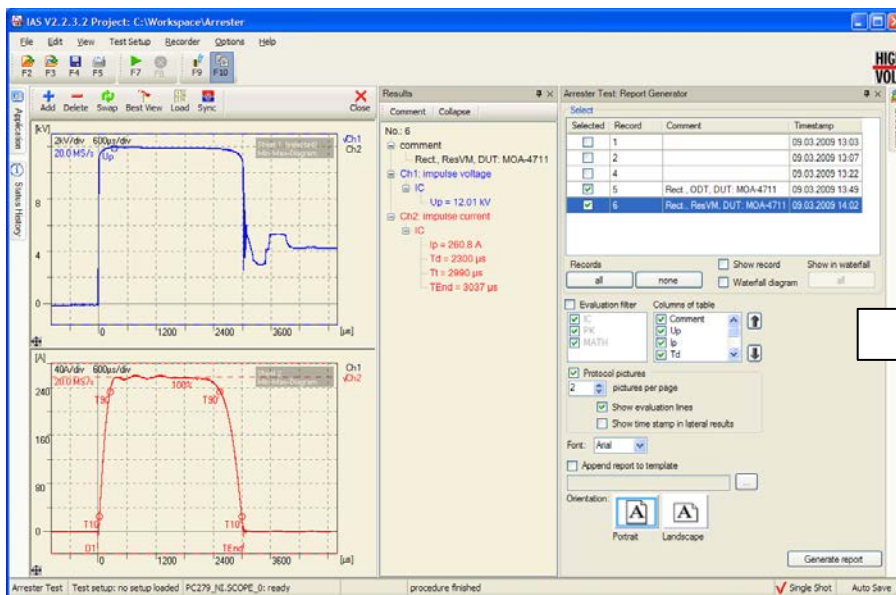


Figure 4: Screenshot of HiRES IAS ARR, report generation