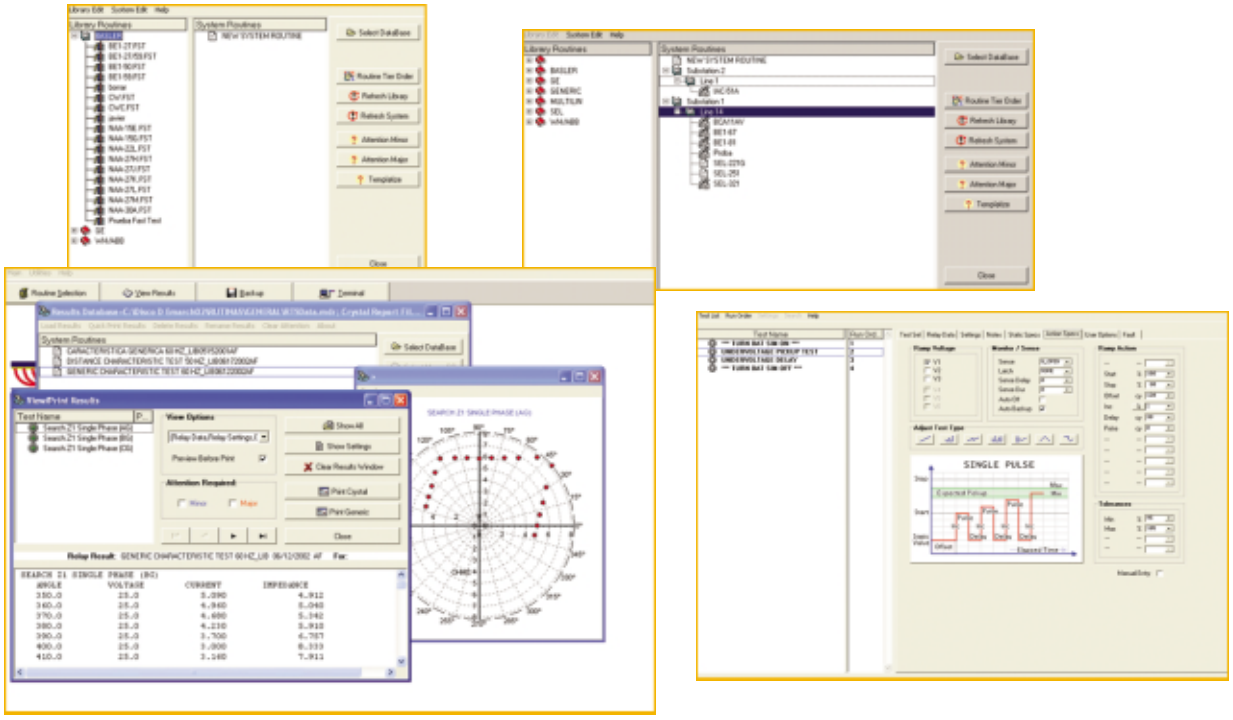
EUROTEST RTS
SOFTWARE

Automatic software to test protective relays



APPLICATION

– Automatic testing for all types of protection relays based on library routines previously programmed for each relay model.
– Enables to create relay test routines over an existing base or a completely new base.
– Enables the organization of test results in an easy and efficient way from an MS ACCESS database.

MAIN FEATURES

– Windows based.
– Relay setting values are entered as appears in the relay, avoiding the need to make any calculations.
– Graphic representation and comparison of test results.
– Test and graphic results are stored in ACCESS database.
– A library of ready made tests including most major brands and models is included.
– Compatible with any combination of PTE equipment (except PTE-100-C) and COMPATEST.
– Drivers can be supplied to work with other types of relay test equipment now on the market (optional).

DESCRIPTON

Windows based, the EUROTEST RTS Software is specifically designed for creating and performing automatic tests on any type of relay from the simplest single-phase overcurrent to the most complex three-phase distance, differential, and digital relays which have many protective functions. The EUROTEST RTS software is a powerful tool, which enables the user to automatically test all the functions contained in these relays. Furthermore, the software is supplied with Library of Relay Tests, which contain a variety of routines for testing a great number of different types of relays. Tests can also be personalized according to specific relays.

The results of the tests, along with the graphic representation are stored so they can be revised at any time. Moreover they are also stored in an ACCESS database which can be manipulated in order to create reports, formats, and organize the information as desired, etc.

Another advantage of EUROTEST RTS software is that it can work with other manufactures test equipment apart from the EUROSMC PTE and COMPATEST range. (Optional upon request.

The Standard EUROTEST RTS software includes:

– EUROTEST RTS software for user and developer.

– A Library of Generic Routines for automatic testing of the following relays:

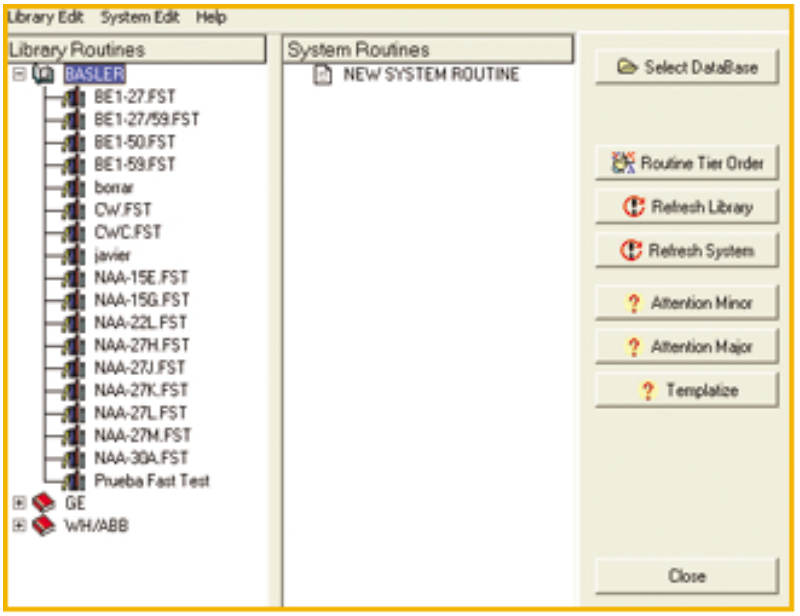
- Frequency relays
- Overcurrent relays
- Directional overcurrent relays
- Distance relays
- Synchro-check relays
- Under/over voltage relays
- Reverse power relays
- Differential relays

– Hardware key, installation disks and instruction manual.

– Drivers for working with the equipment.

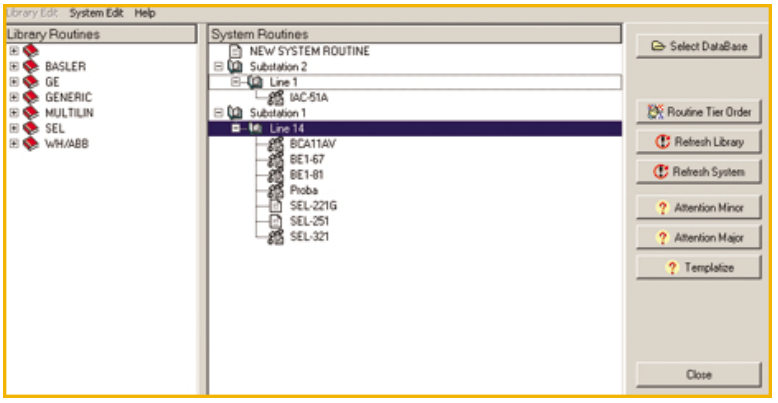
SELECTING A TEST ROUTINE

Selecting a test routine is very easy, first select the database directory and then select the test routine required. Also on this screen, generic routines of each type of relay are included and new routines can be created, existing routines can be copied, or copy existing routines into the system without selecting any database.



GENERIC ROUTINE - DISTANCE RELAY

Shown is the generic routine for distance relays. The software presents all the tests required to test distance relays including the Maximum torque Angle of Mho characteristics, reach test, times, test in each zone, etc. These tests can be performed in several ways, depending on the relay being tested, such as simple ramps, pulse ramps, binary search, successive approximations, etc. The capability of the software enables the test to be flexible to adapt to test any relay from any relay manufacturer.



Furthermore, associated with each routine there is a section that enables the user to put the connection diagrams for a relay under test. Also there is a section for routine notes and test notes that the user may wish to include. Also for generic routine tests there is information on the minimum parameters required. (Test Notes).

The following tabs, located on the bottom left hand corner can edit each of the test routines.

Nameplate, to edit and display the relay settings.

Spec, to edit and display the variable parameters related to nominal values of voltage, currents, phase angles, along with ramp, pulse ramps and/or binary search settings.

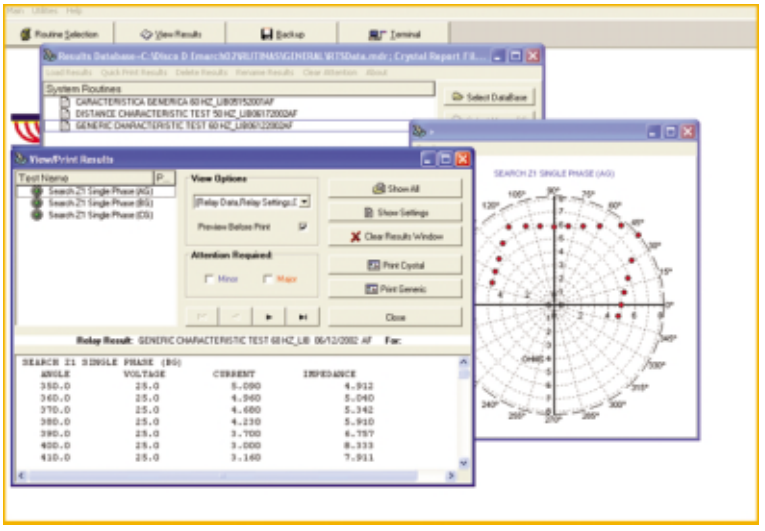
Parameters, to edit and display the settings, such as the speed, the number of points to be tested, and the test result format, etc.

Unit/Com., enables the selection of the equipment to be used and allows to configure the software in simulation mode, which is useful when developing new routines.

DISTANCE RELAY ROUTINE

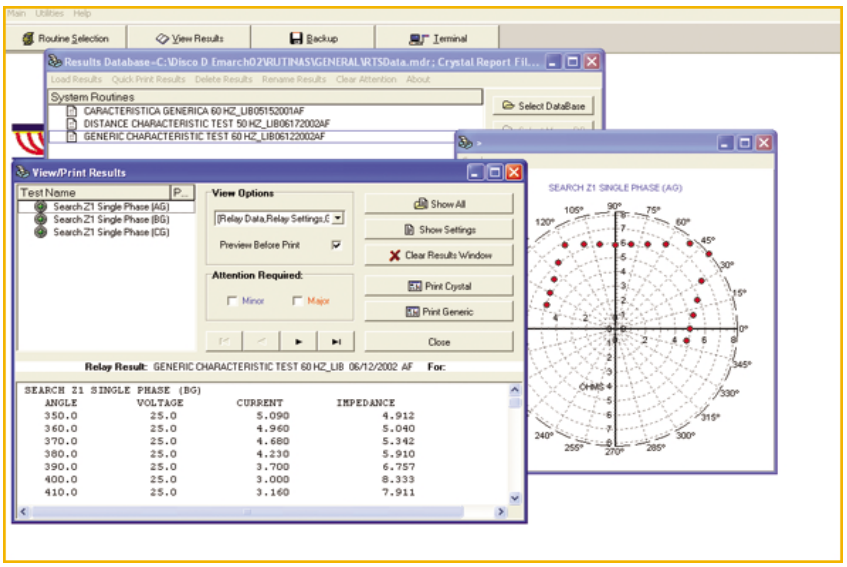
This is a routine designed for a specific distance relay. This is a digital three-phase distance relay with up to 4 zones. The routine made for this specific relay has been made, using the generic routine as a base, compiling the test as required. The procedure employed is as follows:

1. In the screen for selecting the test routine, NEW is used for creating a new routine and naming it immediately afterwards.
2. Press Add From, to copy the test called "Mho Circle Test (V Double Ramp)" from the DISTANCE RELAY ROUTINE GENERIC SCREEN. Using the option Rename, it is renamed as "Characteristics Zone 1". Afterwards, the remaining parameters for the test can be configured.
3. Proceeded in the same way, for the reach and maximum torque angle tests in order to complete one phase. Repeat the same for phases B and C.
4. Once all the test routines are made the program is ready to begin testing. To create other routines for other brand of relays of the same type is simple by using the existing routines and making the modifications required.



RESULTS SCREEN

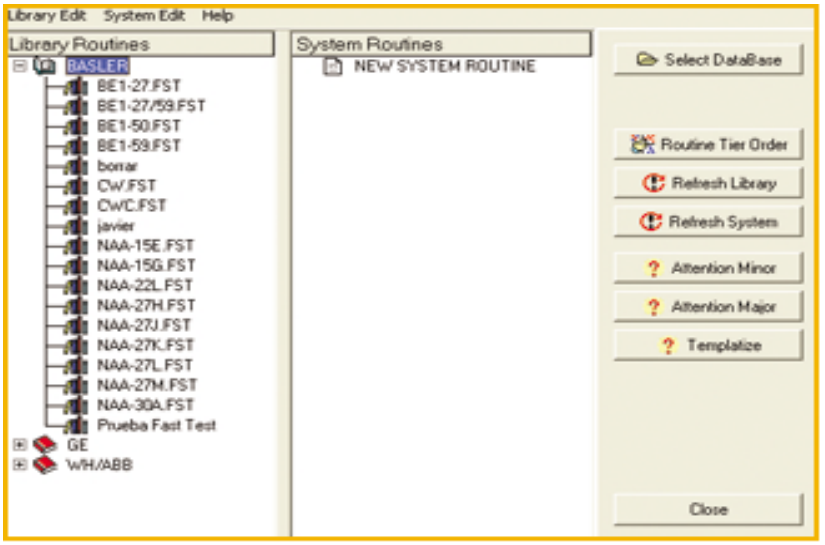
The result screen of the EUROTEST RTS software is complete, simple, and clear. In the upper window shows the tests performed. In the lower window shows the numerical results along with their criteria PASS or FAILED. In the upper right hand-side, a graphic plot of the test is shown.



These results, both numeric and graphic, can be printed by pressing the PRINT button or can be stored in different databases, either AS Left or AS Found. This feature enables to record, store, and keep the history of the relay.

ZOOMING GRAPHIC PLOT

By pressing the button at the top right corner, we can enlarge the previous graphic test points made.



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