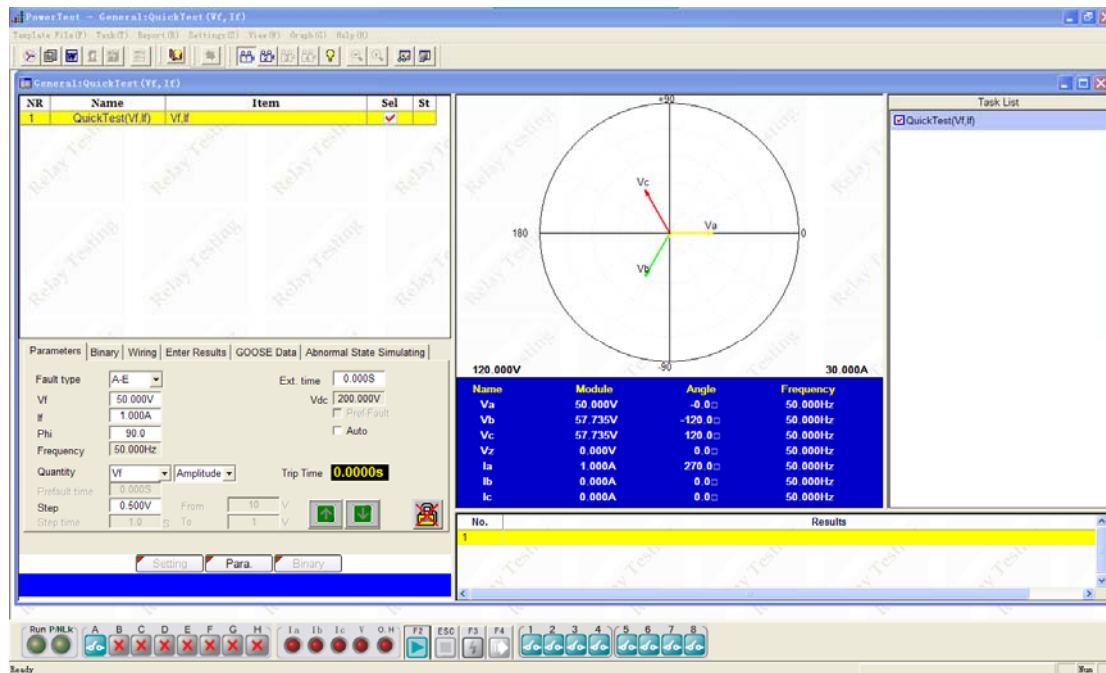


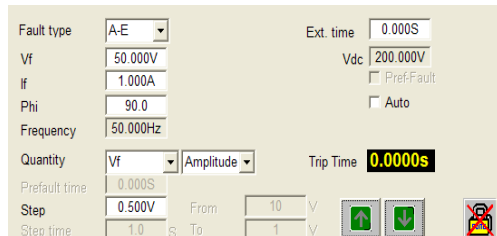
Vf-If Check



This module searches for the minimum voltage or current of distance relay.

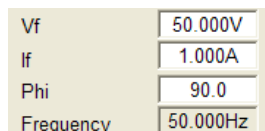
Manual test mode

In this mode we can manually control all sources to change with set steps.



Sources available to control

We have the following sources available to control.



Note: in case **Vdc** is not used to supply auxiliary DC voltage to drive relay we can also control it here.

Select variable to control

Following variables can be selected to control

Vf	Control Vf _{fault}
If	Control If _{fault}

Select quantity to control

For each selected variable we can select the following quantities to control.

Amplitude	Control the amplitude
Angle	Control the phase angle

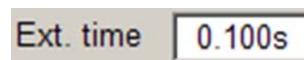
Select control step

Here we can set the control step



Ext. time

When this time is set here the output time will be extended even after relay trips.



This time setting is normally used in the test application where we need to consider the circuit breaker mechanism operation time.

Trip time display

If relay trips we can see the trip time here



Output control button

When test is started we can use these two buttons to control the variable of the selected quantity with set step.



Lock control button

This control button is designed to test the relay tripping time in manual mode.



Before test is started this button is not activated

Example: test the relay tripping time with **Lock** button in manual mode

Step 1:

Make wiring, connecting voltage and current outputs to relay and connect relay tripping output to binary input 1

Step 2:

Set normal voltages and currents for a health system

Step 3:

Start output and the button becomes



Step 4:

Press **Lock** button



Step 5:

Modify voltages and currents to faulty status

Step 6:

Press **Lock** button to release the lock.



At the same time the internal timer will start. When relay trips the timer will stop and the tripping time will be displayed.

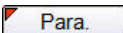
Auto test mode

Set group test parameters

Click  button to enter into group parameter page. Group test parameter page along with default settings is shown bellow

Set group test parameters

TPdefault

Click  button to enter into group parameter page. Group test parameter page along with default settings is shown bellow

Name	Value	Variable
Ramp Mode	from-to	TestMode

Ramp Mode

Select change mode.

Following control modes are available for selection.

from-to	Test pickup
from-to-from	Test pickup and drop-off

In auto test mode some more test parameters will be allowed to set

Fault type	A-E	Ext. time	0.000S
Vf	50.000V	Vdc	200.000V
If	1.000A	☒ Pref-Fault	
Phi	90.0	☒ Auto	
Frequency	50.000Hz		
Quantity	Vf	Amplitude	
Prefault time	0.000S	Trip Time	0.0000s
Step	0.500V	From	10 V
Step time	1.0 S	To	1 V



Pre-fault

Select pre-fault status.

- **Prefault time** Prefault time setting

Set start and end value

In Auto mode the selected variable will ramp with the set start and stop value.

from	0	V
to	10	V

from: the start point from where the variable will ramp

to: the stop point. If relay does not trip during the ramping process the test will terminate at this point

Note: the '**from**' value must be set in the way that relay will not trip at this setting.

For some type of relay, such as low voltage relay, the '**from**' setting is larger than '**to**' setting

Set step time

Here we can set the control step

Time	2	S
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Note: due to communication requirement between test set and external computer the step time **cannot be set less than 2s** in order to test the trip time