



VEBKO ONLINE HELP

AMT VCC Room

Category	tester
Section	AMT VCC Room
Language	English
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1 Imported Content

This room is designed to test different relays in the shortest possible time and in the form of using standard scenarios based on periodic testing regulation of Iranian power grid protection systems.

You will see two windows by entering to the AMT VCC room. VCC Panel, which is actually the main window for selecting functions and test management. VCC Report View, will show you the relay test report.

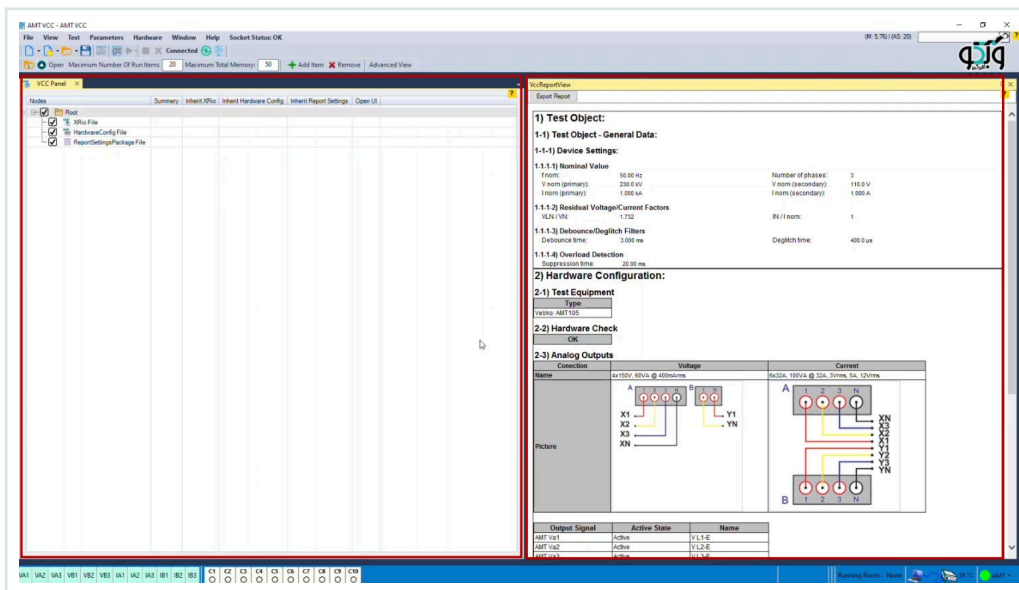


Figure 1

This will be done by selecting an icon with the letter L. These templates are available in two categories for each relay. In the Fast Test section, you will see a limited number of tests.

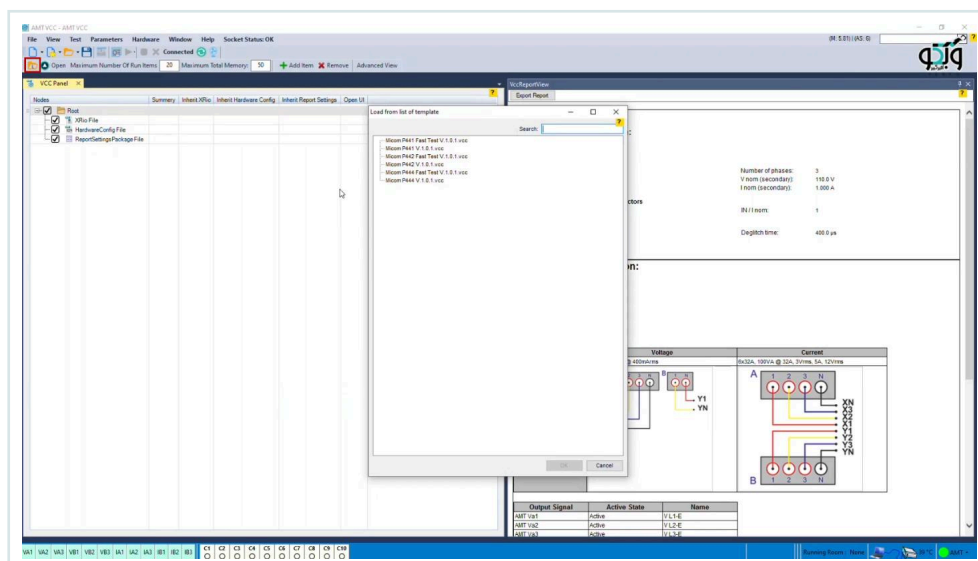


Figure 2

For example, in quick tests, there is no transient test.

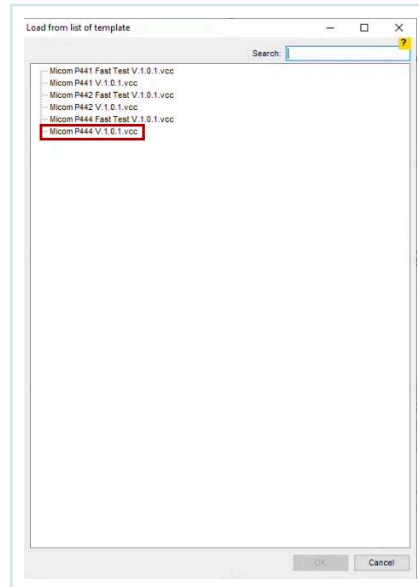


Figure 3

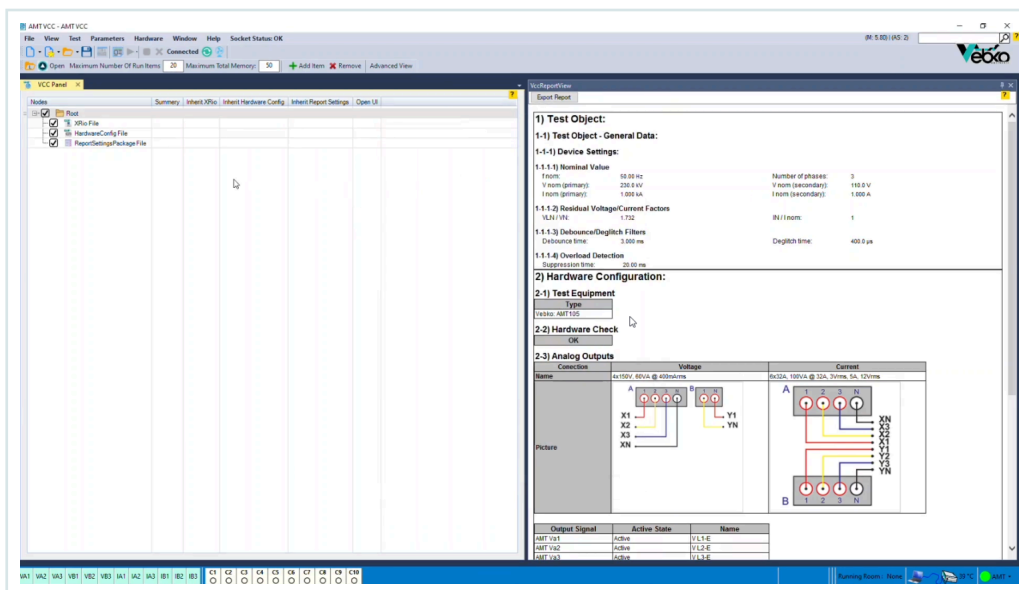


Figure 4

However, by selecting the other option, there will be a complete set of tests in front of you. As you can see, by loading the template, a variety set of tests for different functions will be in front of you.

In the Nodes section, you'll see available subcategories to test each function. In the Summary column, a summary of the test status and whether it is successful or unsuccessful will be displayed. The three options of Inherit Xrio, Inherit Hardware Config and Inherit Report Settings by being active,

respectively, will make the user's chosen function inherit all settings from Xrio, hardware settings and report settings. However, by disabling them, you can apply the settings to each one and manually as you wish. The Open UI option will also allow you to manage the opening of the related window to each test.

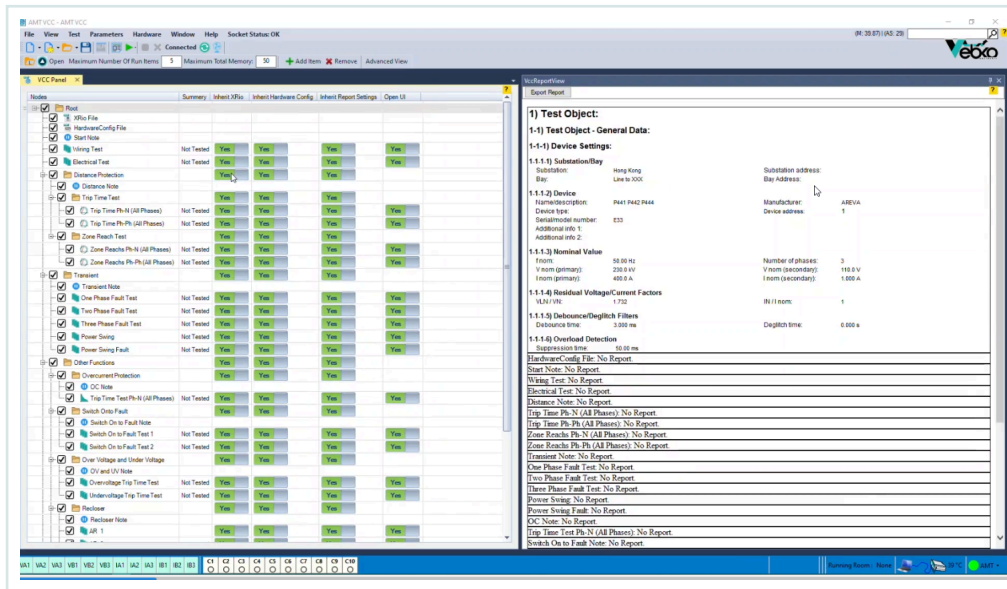


Figure 5

If you select Advanced View from the above section, more elements such as test window status, reporting status, test progress rate, and more will be observed.

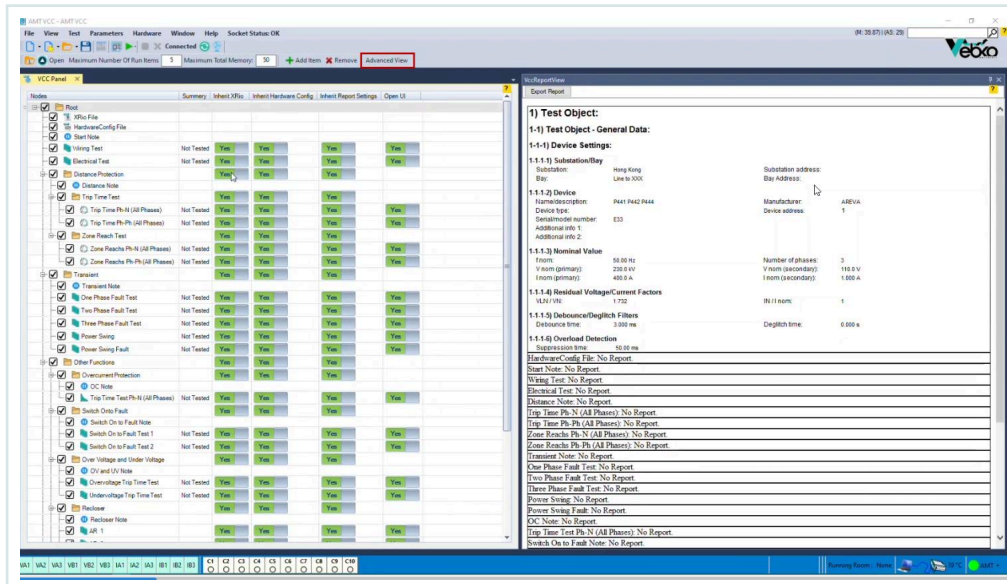


Figure 6



Figure 7

In the Root subset, the Xrio file is located first. By selecting this option and clicking the Open option, you can upload the Xrio received from the relay, which actually fits the active functions set.

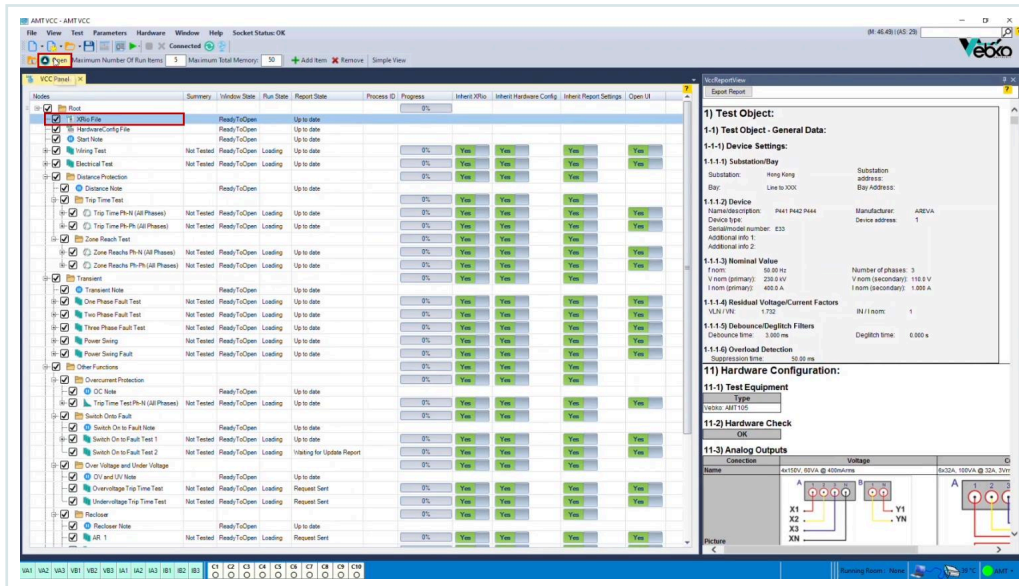


Figure 8

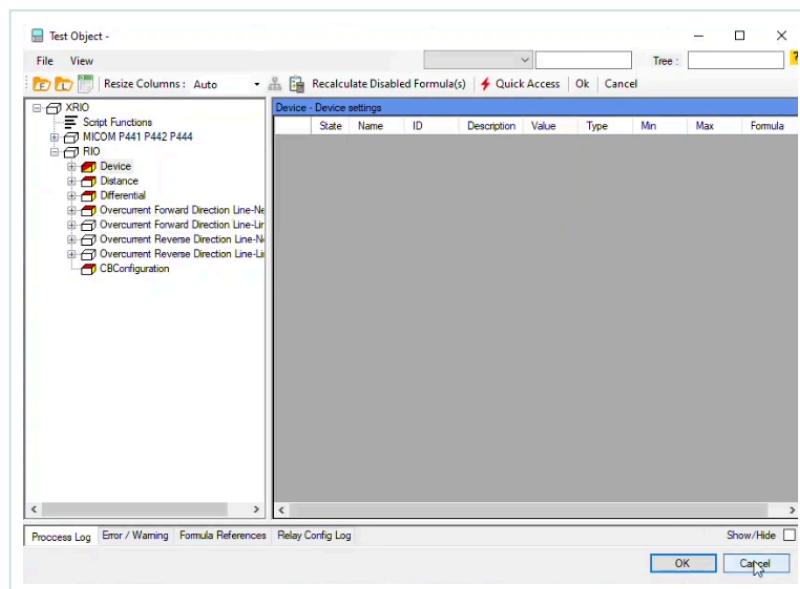


Figure 9

You can access the details by clicking on any other option and selecting Open. For example, by clicking HardwareConfigFile you can view and edit the default hardware configuration for current and voltage injection, as well as inputs and outputs of the test device.



Figure 10

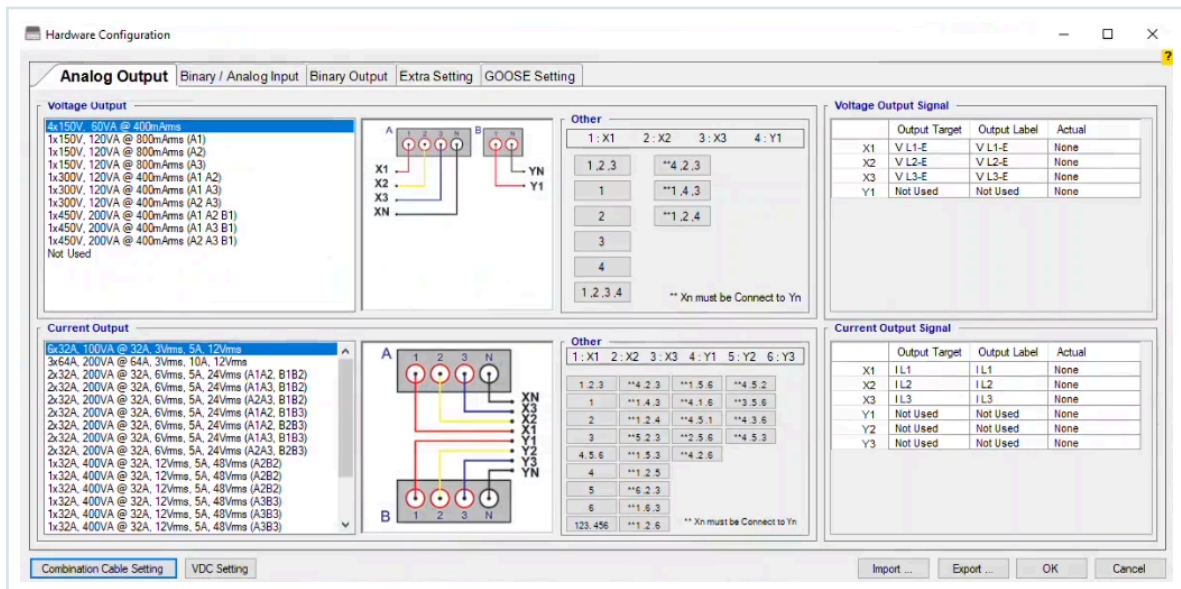


Figure 11

The Start Note option, which is located before testing each function, also provides the user with explanations to guide the test further. In this section you can enter the information that test man guide during the test. For example, you can place a note in the overcurrent protection function that indicates the overcurrent protection in your relay is an emergency type and can only be activated by blocking distance protection and can be tested.

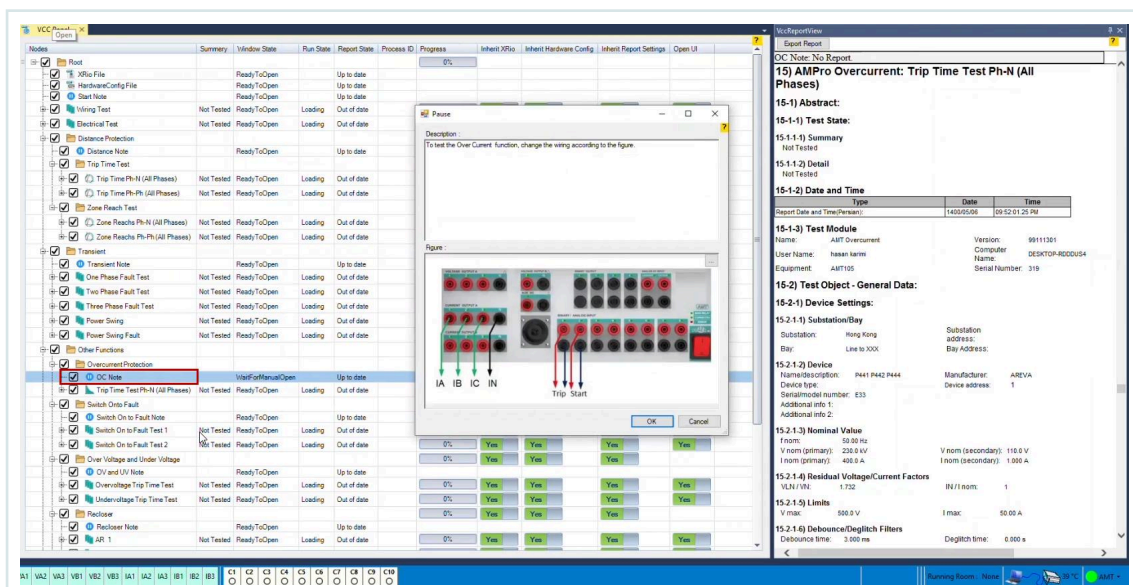


Figure 12

In the top part of the page, you can add or remove tests by clicking Add Item or Remove. For example, here we remove Switch Onto Fault, Recloser and VTS tests due to the inactivity of these

functions in our relay as well as the shortening of the testing process.

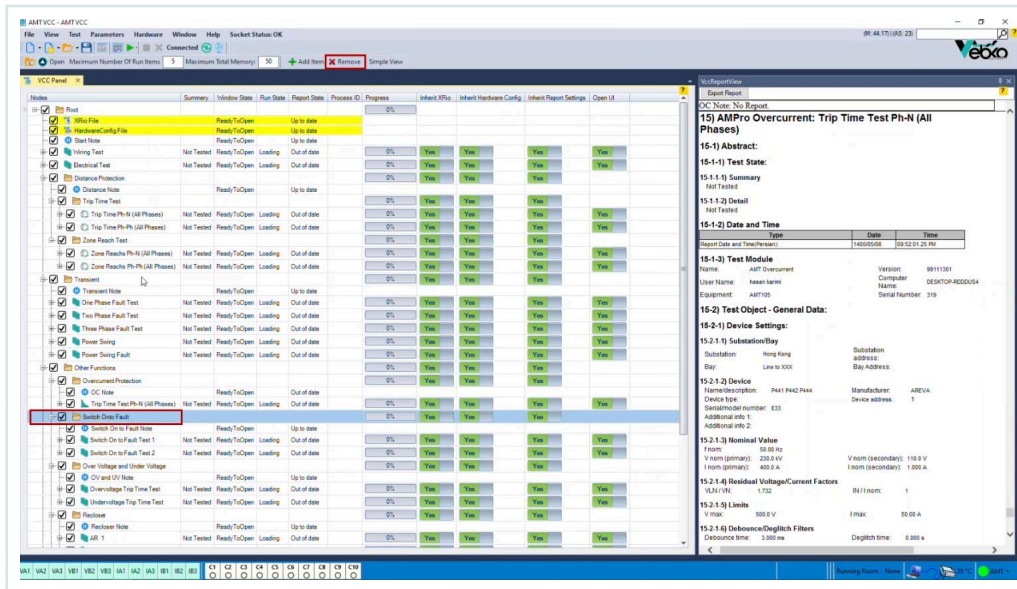


Figure 13

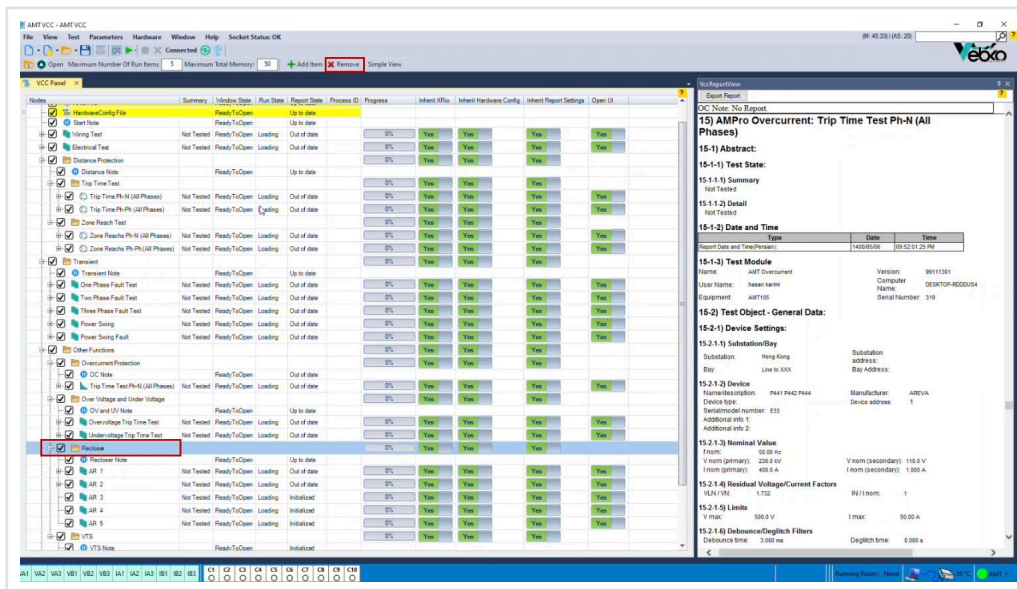


Figure 14

In addition, you can make it possible to change settings or points by disabling Inheriet Xrio. For example, for overcurrent protection, we applied settings manually and placed different points on the characteristic curve than those designed in accordance with XRIO.

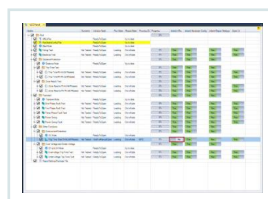


Figure 15

In the first stage of testing, Wiring Test is designed to check the current and voltage values injected from the device on the relay to ensure the correct wiring.

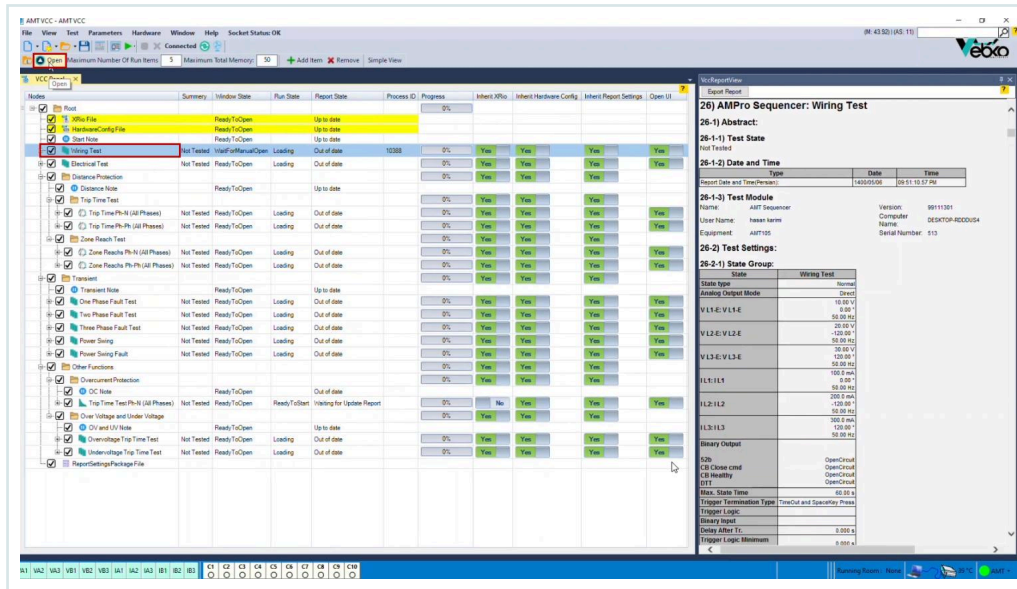


Figure 16

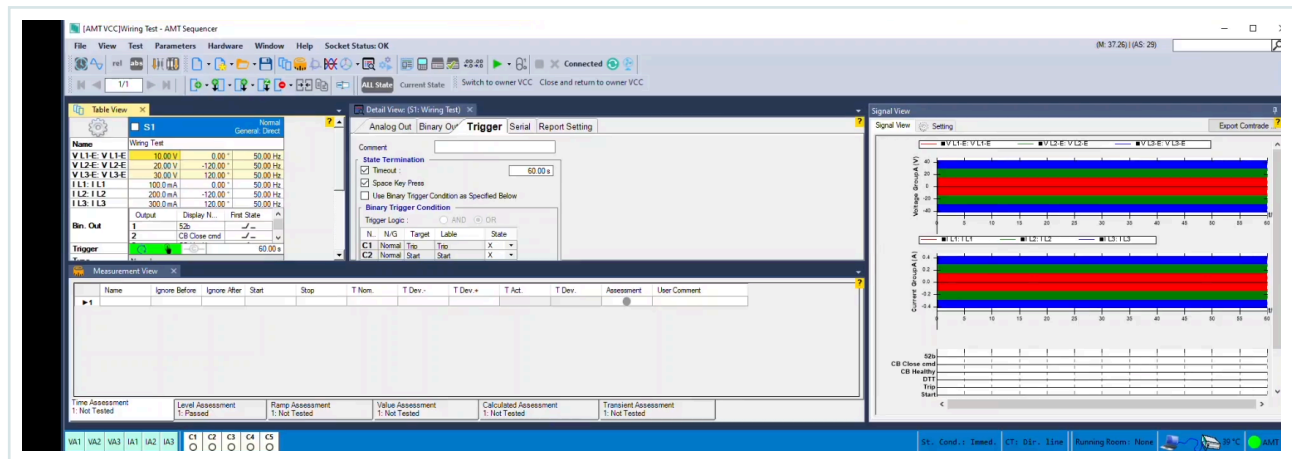


Figure 17

Electrical Test is another option that, with three state including PreFault, Fault and PostFault, checks the relay conditions in different situations and ensures registering the trip when a fault occurs.

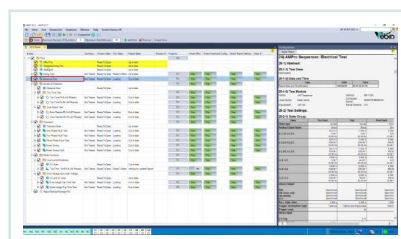


Figure 18

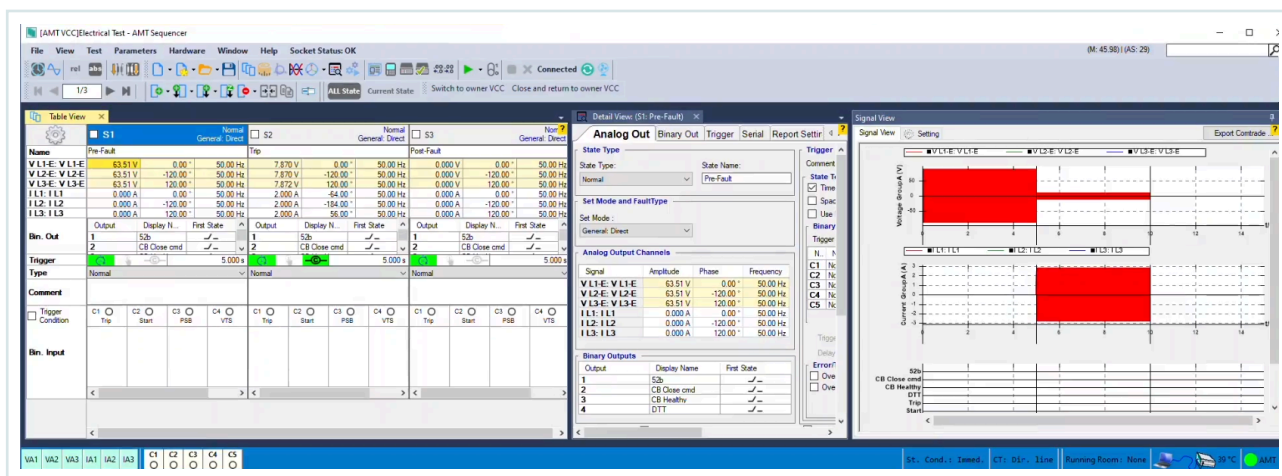


Figure 19

As mentioned above, a set of tests for different functions is designed in the default template but it is possible to remove, add and manage the tests accurately for the user.

In this way, you can determine the priority of performing different tests, disable some tests, and even more precisely, specify which tests to do with what values and in what range.

You can check how the test is designed by clicking on each test and selecting Open. For example, you can view or edit points on the characteristic by selecting Zone Reaches for the Distance function.

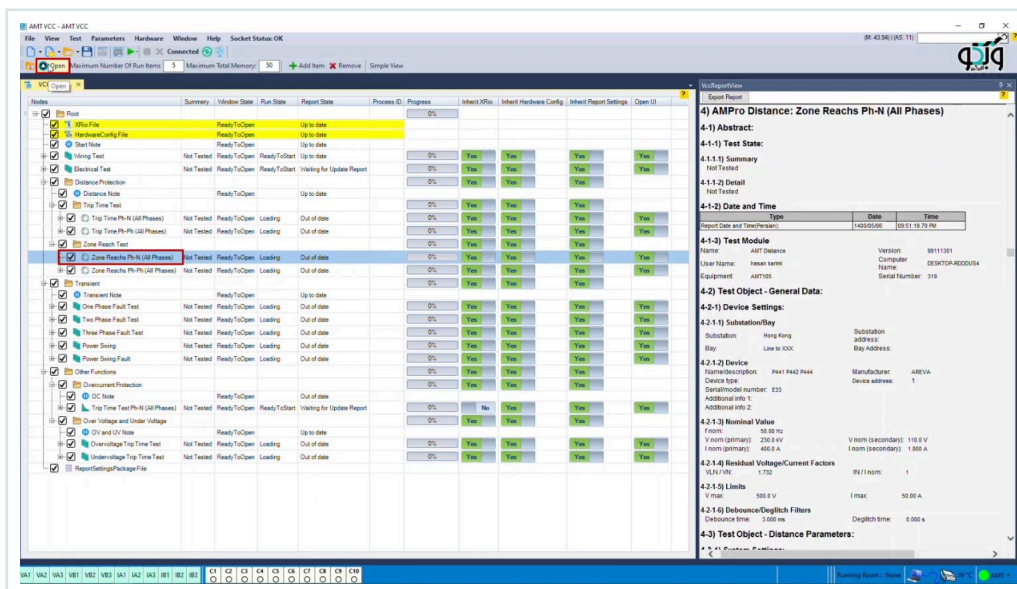


Figure 20

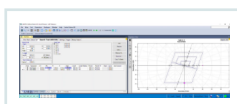


Figure 21

By running the test, you can check different functions. Finally, by right-clicking on the VccReportView window, you can have a complete management of the items that are going to be displayed in the report.

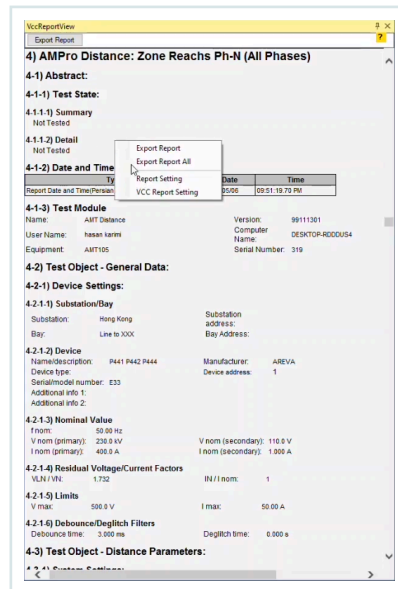


Figure 22

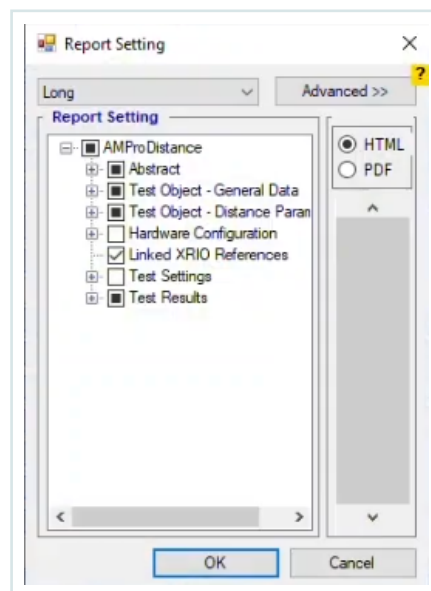


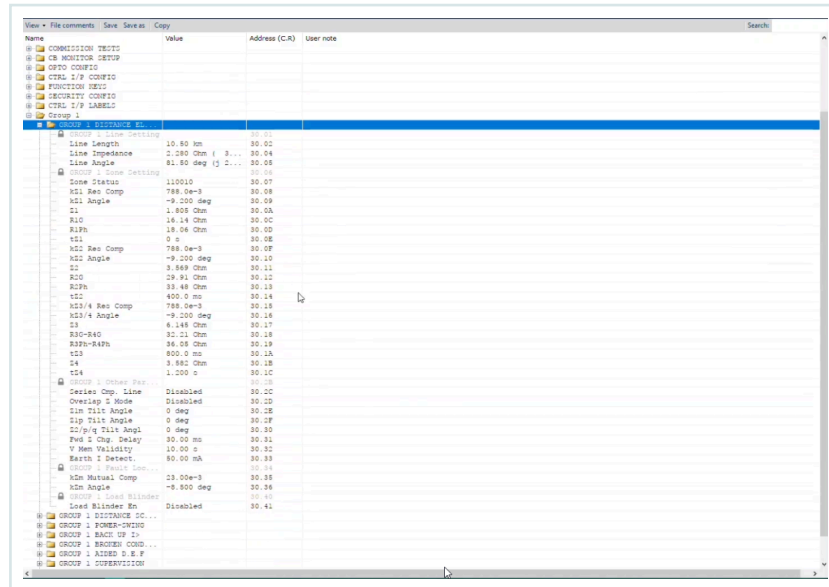
Figure 23

For example, here we will perform the Micom P444 relay test in AMT VCC room. In the Configuration section, you can see the active or inactive status of the functions.



Figure 24

In the subset group 1 of settings, you can also see details about each function's settings and values.



Name	Value	Address (C.A)	User note
GROUP 1: DISTANCE SET			
Line Length	10.00 km	00.00	
Line Impedance	2.000 Ohm (3...)	00.04	
Line Angle	81.00 deg (3...)	00.08	
GROUP 1: LINE SETTING			
Zone Status	110010	00.07	
K11 Res Comp	788.0e-3	00.08	
K11 Angle	-9.200 deg	00.09	
Z1	1.800 Ohm	00.0A	
R10	18.14 Ohm	00.0C	
R10h	18.04 Ohm	00.0D	
Z11	0.0	00.0E	
K12 Res Comp	788.0e-3	00.0F	
K12 Angle	-9.200 deg	00.10	
Z2	3.569 Ohm	00.11	
R20	29.91 Ohm	00.12	
R20h	31.48 Ohm	00.13	
Z20	400.0 mS	00.14	
K21 Res Comp	788.0e-3	00.15	
K21 Angle	-9.200 deg	00.16	
Z3	6.148 Ohm	00.17	
R30-R40	31.11 Ohm	00.18	
R30h-R40h	36.08 Ohm	00.19	
Z33	800.0 mS	00.1A	
Z4	3.592 Ohm	00.1B	
Z54	1.000 c	00.1C	
GROUP 1: OTHER PAR.			
Series Cmp, Line	Disabled	00.2C	
Overlap 0 Mode	Disabled	00.2D	
Line Tilt Angle	0 deg	00.2E	
Tip Tilt Angle	0 deg	00.2F	
Tip Tilt Angle	0 deg	00.30	
Pwd 2 Cmp. Delay	30.00 ms	00.31	
V Sen Validity	10.00 s	00.32	
Earth 2 Detect.	80.00 mA	00.33	
GROUP 1: FUEL SET...			
K2m Mutual Comp	21.00e-3	00.35	
K2m Angle	-8.800 deg	00.36	
GROUP 1: LOAD WINDER			
Load Blinder En	Disabled	00.41	
GROUP 1: DISTANCE SC...			
GROUP 1: POWER-CHRG			
GROUP 1: RACH UP I...			
GROUP 1: RACHEN COO...			
GROUP 1: A2SD 0.8 F			
GROUP 1: SUPERVISION			

Figure 25

In the PSL relay section, we also configured the inputs, outputs and leds for different functions. Now it's time to save the XRIO settings file.

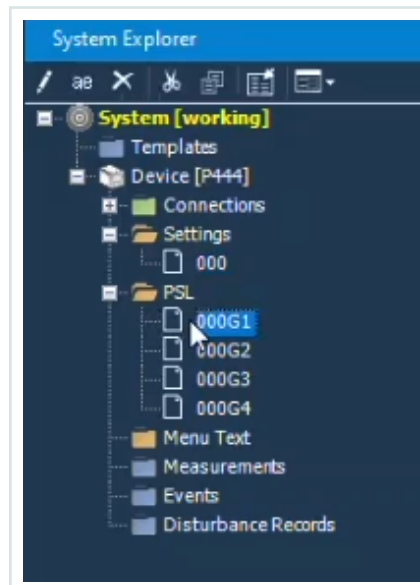


Figure 26

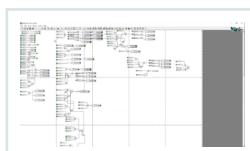


Figure 27

In the next step, we re-enter the AMT VCC room and first load the template related to the P444 relay. Now we prepare different function tests using the XRIO file that we took from the relay in the previous step. By running the test, you can control the test of different functions step by step.

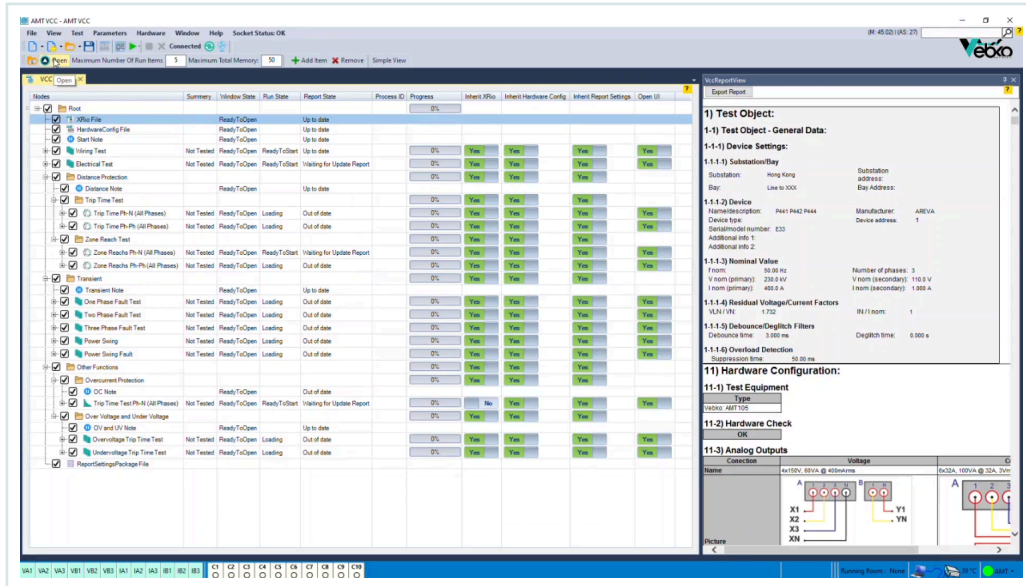


Figure 28

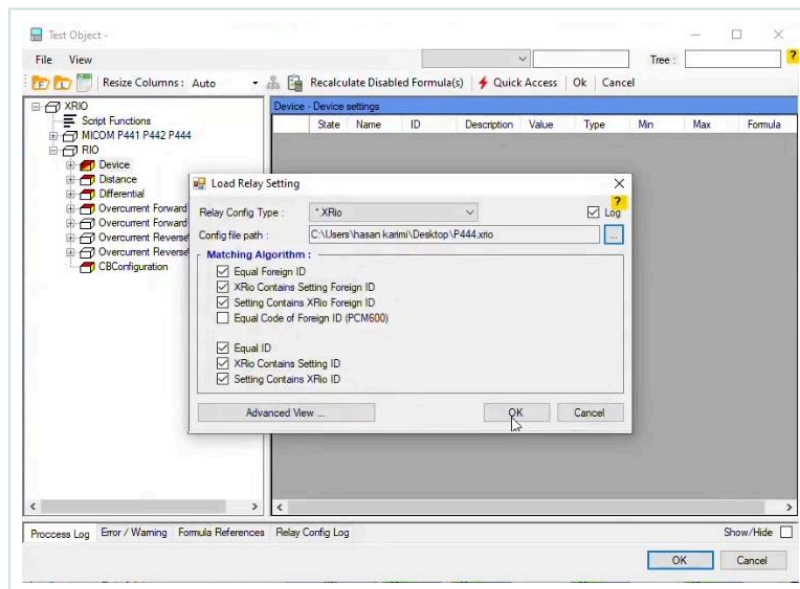


Figure 29

[ig1]AMT_VCC