

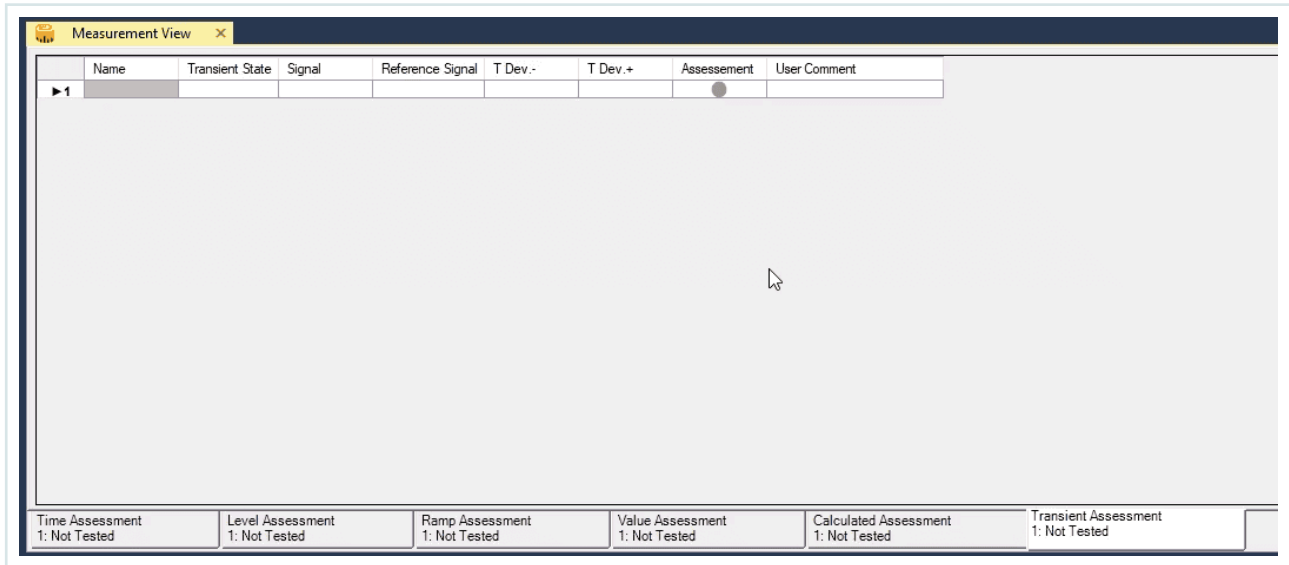


VEBKO ONLINE HELP

"Transient Assessment" Tab

Category	tester
Section	AMT Sequencer Module
Language	English
Generated	2026-10-18

The "Transient Assessment" section is used to assessing the "States" that are designed for testing the "Transient". In this section, a received contact by the device from the relay can be time-compared to the binary signal in the "Comtrade" file. A sample of the application of this "Assessment" is to compare the performance of the relay while applying the signals of transient file so the user would understand that whether or not the relay has a similar function while a fault occurs.



Name	Transient State	Signal	Reference Signal	T Dev. -	T Dev. +	Assessment	User Comment
▶ 1							

Time Assessment
1: Not Tested

Level Assessment
1: Not Tested

Ramp Assessment
1: Not Tested

Value Assessment
1: Not Tested

Calculated Assessment
1: Not Tested

Transient Assessment
1: Not Tested

Figure 1

In the "Measurement View" window, the "Transient Assessment" tab, a name is inserted for assessment in the "Name" field so better feedback is obtained from the specified item. In the "Transient" field, the intended "State" is selected. Remember only the name "States" which are "Transient" type are displayed in this field. In the "signal" field, a binary signal is selected for comparison with the reference signal from the "Comtrade" signal. In this field, the list of all the binaries activated in the "Hardware Configuration" is displayed that one of them should be selected. In the "Reference Signal" field, the reference signal is selected from the "Comtrade" file. By clicking on this field, all the existing binary signals in the loaded "Comtrade" file are displayed. In the "T Dev. -" field, the negative time tolerance related to the digital signal edge is specified and imported in the "Comtrade" file. In the "T Dev. +" field, the positive time tolerance related to the digital signal edge is specified and imported in the "Comtrade" file. The result of the assessment after running the test will be displayed in the "Assessment" field. The green color means the test is "Passed" and the red color meant that the test is "Failed". In the "User Comment" field, a message can be written about the test, before and after the test which is used in the output report. By right-clicking on the "Transient Assessment" the tabs and options are displayed that are similar to right-clicking on the "Time Assessment" tab, which was comprehensively explained in the previous educational videos (Time Assessment). The assessment in this tab is defined according to the comparison of the signal with the reference signal. For assessment, if both the signals are identical in the specified time period and have a similar status, then the assessment will be "Passed". Otherwise, the assessment is "Failed" showing that the relay didn't have a similar performance while importing error and had another status.

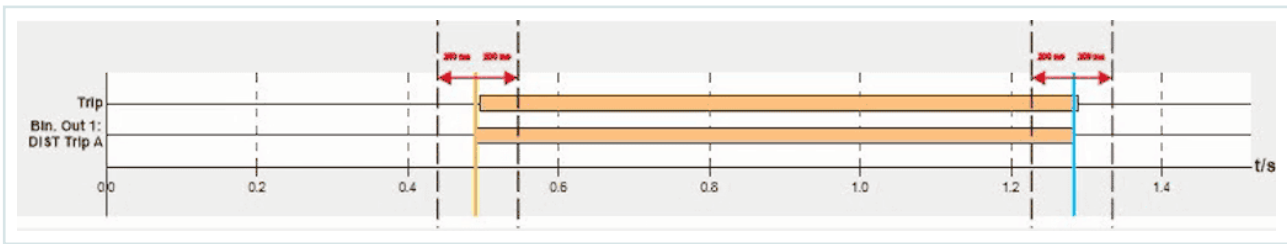


Figure 2

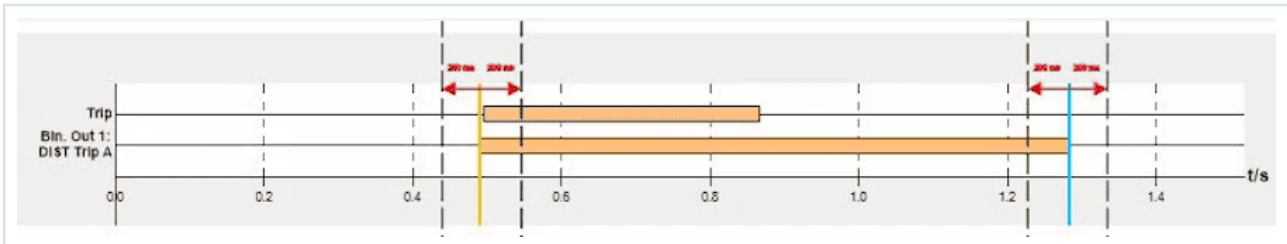


Figure 3

To do this at first, some adjustments should be performed in some windows. In the following, an example of the test will be discussed. At first, the "Transient" state will be selected in the "Detail View" window and by clicking on the "Import Comtrade..." file, the transient state of the "Micom P441" relay is loaded. Then, by clicking on the "Current State" option from the toolbar, all the active and inactive binaries existing in the "Comtrade" file and the voltage and current signals are displayed. In the following, by checking the "Calculate RMS ...", the software calculates the effective values and the phases of the signals.

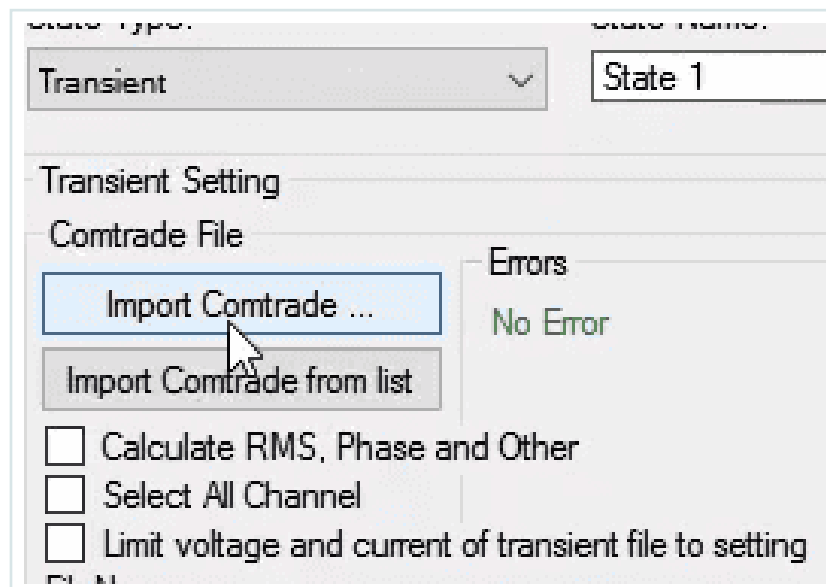


Figure 4

Signal	Channel	Scale	Min	Max	Prim. factor	Sec. factor	PS
V1L1E	VA	100.0 %	-33.47 kV	33.53 kV	1.000 V	1.000 V	Primary
V1L2E	VB	100.0 %	-25.22 kV	25.22 kV	1.000 V	1.000 V	Primary
V1L3E	VC	100.0 %	-34.49 kV	35.12 kV	1.000 V	1.000 V	Primary
I1L1	IA	100.0 %	-160.2 A	157.4 A	1.000 A	1.000 A	Primary
I1L2	IB	100.0 %	-477.9 A	477.9 A	1.000 A	1.000 A	Primary
I1L3	IC	100.0 %	-195.1 A	193.4 A	1.000 A	1.000 A	Primary

Figure 5

Subsequently, from the "Detail View" window and "Binary out" tab, each of the existing signals in the "Comtrade" file that should be tested and assessed should be ascribed to a "Binary Output" and selected as the reference signal. In this video, two "ZONE1" and "ANY TRIP" signals are ascribed to "binary out" 1 and "Binary Out" 2, respectively and the reception of trip signal from the relay signal is compared to "ZONE1" signal to be assess.

Out...	Display Name	Transient
1	Bin. Out 1	ZONE 1
2	Bin. Out 2	ANY TRIP

Figure 6

In the "Hardware Configuration" window, "Binary / Analog Input" tab, binary 1 with the name of "Trip" is connected to the relay trip contact for comparison with the active reference signal. In the "Transient Assessment" tab, in the "Name" field a name for example "trip1" is inserted for assessment. The "State1" that is a transient state is selected in the "Transient State". In the "Reference Signal", the reference signal that is selected in the "Binary Output" is inserted (ZONE1) and the "Trip" signal is selected in the "Signal" field for comparison. In the "T Dev. -" and "T Dev. +" time tolerance "3" is inserted. In order to observe the "Binary Input" status, the "All State" option are selected from the toolbar and the test is executed so the fault is applied to the relay. Finally, in the "Signal View" the relay has the same performance as the reference signal, which is defined as the "Binary Output1", and the assessment result is "Passed".

☐	Binary-Input Target	Binary-Input Label	Binary-Input Type
☒	Trip	Trip	Dry
☐	Not Used	Not Used	Dry

Figure 7

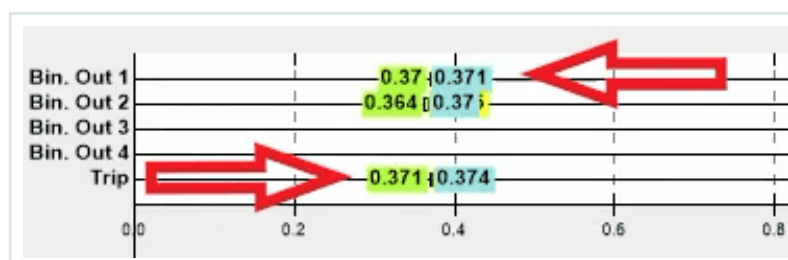


Figure 8

	Name	Transient State	Signal	Reference Signal	T Dev.-	T Dev. +	Assesment	User Comment
▶ 1	trip1	S1: State 1	C1: Trip	ZONE 1	0.0030	0.0030	+	

Figure 9

[jg1]Transient_Assessment_Tab