

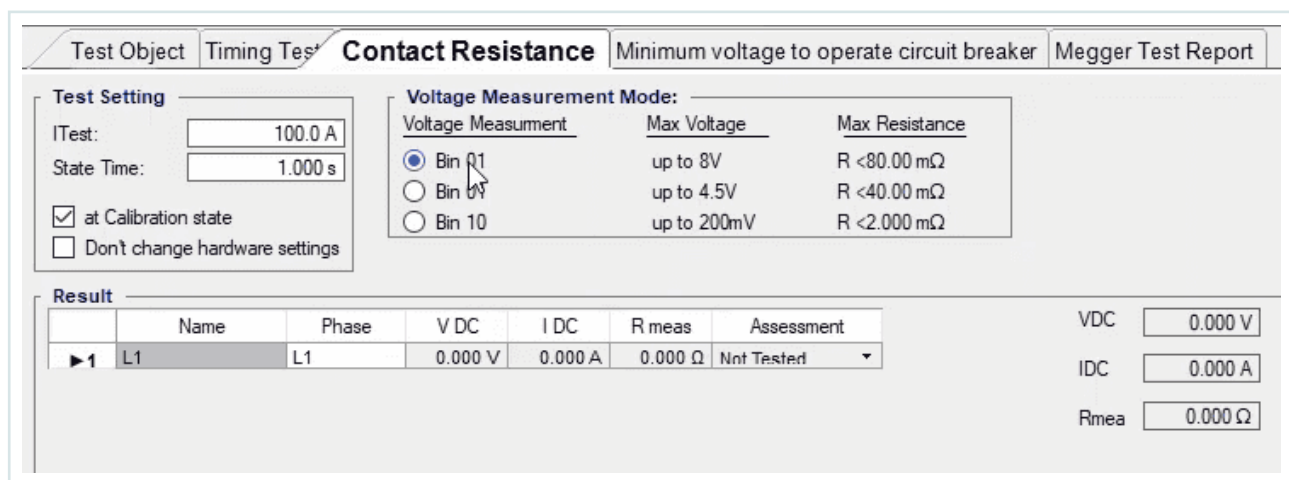


VEBKO ONLINE HELP

“Contact Resistance” Tab

Category	tester
Section	Circuit Breaker Module
Language	English
Generated	2026-10-18

In this tab, ohm resistance test of CB contacts is performed. The test settings include "I Test" and "State Time" is specified in "Test Setting". As you know, the method used by "AMT105" to measure the resistance is dividing the measured voltage by the injected current. In "Voltage Measurement Mode" section, you can select from among inputs "1" and "10" for the measurement in accordance with the voltage level and the maximum CB contact resistance. As you can see, "Bin 01" has two voltage levels for the measurement. The first level is "4.5" volts on "Wet4.5" while the second level is on "Wet30" but since the device current resources can only produce up to "8" volts, this item is limited to "8" volts.



Test Object **Timing Test** **Contact Resistance** Minimum voltage to operate circuit breaker Megger Test Report

Test Setting

ITest: 100.0 A
State Time: 1.000 s

☒ at Calibration state
☐ Don't change hardware settings

Voltage Measurement Mode:

Voltage Measurement	Max Voltage	Max Resistance
☒ Bin 01	up to 8V	R < 80.00 mΩ
☐ Bin 02	up to 4.5V	R < 40.00 mΩ
☐ Bin 10	up to 200mV	R < 2.000 mΩ

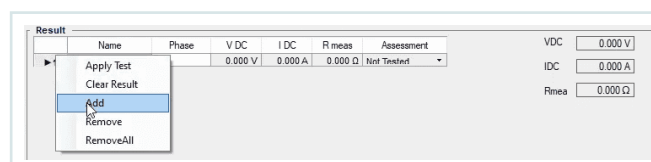
Result

	Name	Phase	V DC	I DC	R meas	Assessment
► 1	L1	L1	0.000 V	0.000 A	0.000 Ω	Not Tested

VDC: 0.000 V
IDC: 0.000 A
Rmea: 0.000 Ω

Figure 1

In "Result" section, the ohm resistance measurement result of each contact is displayed. To perform this test, first, you need to add as many rows as the contacts by right-clicking and clicking "Add". Then, set the wirings in accordance with the specified picture. Note that by double-clicking on this picture you can magnify it. In this wiring, you need to "Jumper "la1", "lb1", "la2" and "lb2" together and "la3", "lb3", "la4" and "lb4" together and connect "la1" and "la4" phases to the CB contact in accordance with the picture. To measure the voltage, the selected "Binary Input" should be connected to the CB contact and further from the current connectors. Note that to perform the test using a clamp and injecting high currents, multiple parallel wires should be used and they should be connected to the side where there are three pins while the voltage measuring wire should be connected to the side where there is only one pin. To perform the test, right-click on the phase related to that row and select "Apply Test". In "Signal View" section, the waveform of the current along with its "Actual" values and the measured voltage can be viewed. Also, in "Table View", you can see that two "States" are created in accordance with the settings specified in "Test Setting" and the test is performed. Note that, to test each contact, you need to add the related row in "Result" section and test each contact separately by setting the specified wiring.



Result

	Name	Phase	V DC	I DC	R meas	Assessment
►	L1	L1	0.000 V	0.000 A	0.000 Ω	Not Tested

VDC: 0.000 V
IDC: 0.000 A
Rmea: 0.000 Ω

Figure 2

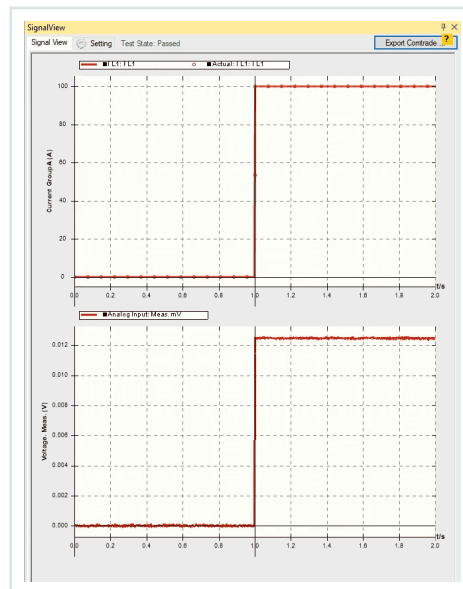


Figure 3

Table View								
	☐ S1 Normal General: Direct			☐ S2 Normal General: Direct				
Name	state1: Contact Resistance			state1: Contact Resistance				
I L1: I L1	0.000 A	0.000 1/s	0.000 Hz	100.0 A	0.000 1/s	0.000 Hz		
Bin. Out								
Trigger				1.000 s				1.000 s
Type	Normal			Normal				
Comment								
☐ Trigger Condition								
Bin. Input								

Figure 4

In this table, custom name, name of the phase, the measured voltage, the actual injected current, the measured resistance and the result of the assessment are entered in "Name", "Phase", "V DC", "I DC", "Rmeas" and "Assessment" fields respectively. Note that the test assessment is done by comparing the resistance entered in "Test Object" and the measured resistance.

Result						
	Name	Phase	V DC	I DC	R meas	Assessment
1	L1	L1	12.45 mV	100.1 A	124.4 $\mu\Omega$	Passed
2	L2	L2	12.46 mV	100.1 A	124.5 $\mu\Omega$	Passed
► 3	L3	L3	12.45 mV	100.1 A	124.4 $\mu\Omega$	Passed

Figure 5

In the end, after the test is performed, the results should be added to the report which is done by clicking on "Add to Report". Also, if you wish to add specific parts of the test to the report delete or edit it, you can use the "Add to Report" cog. By clicking on this cog, you can see that the items that can be added to the "Report" are checked and if you do not wish any of these items to be added to the report, you can simply uncheck your intended item. Also note that the test results are not automatically added to the report after performing a test and it is necessary to add the results to the report by selecting "Add to Report" before "Clearing the test".

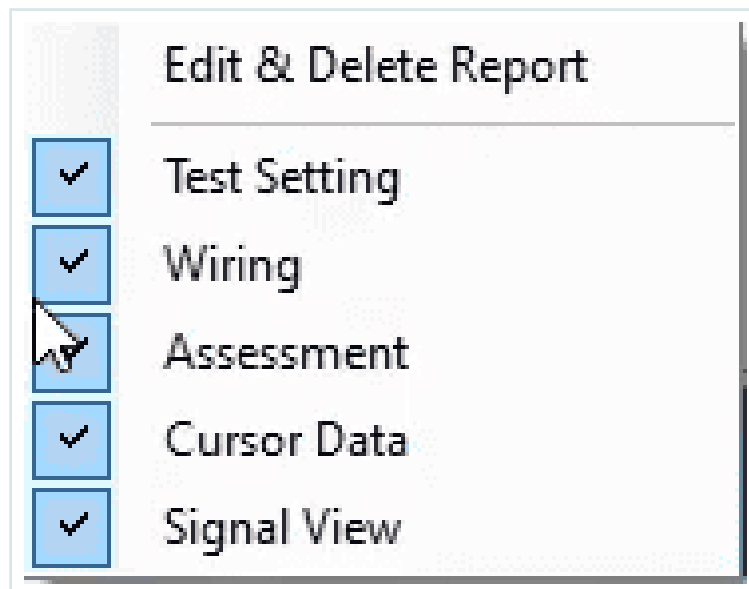


Figure 6

In performing this test, it is imperative to note the following:

First: "Error Other" in performing the test means that there is a problem in connections or the current route resistance is too high that the device is not able to provide the "Burden" needed to inject the current. Therefore, in this case, check the "Actual current" from "Signal View". If the current is injected ("Actual Current") but the difference with the specified current is too large, this indicates the high route resistance and if the "Actual Current" equals zero, this means that the current injection route is open. In the cases where the route resistance is high, the test current must be decreased and if the "Actual Current" equals zero, the connections must be examined. make sure the CB is closed.

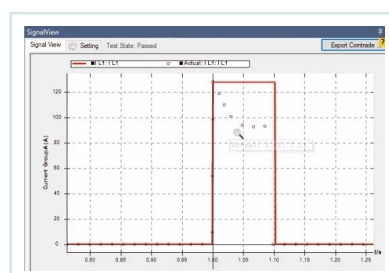


Figure 7

Second: the measured voltage must have similar cycles. A high tolerance or a zero voltage means that the connectors are not connected correctly.

Third: in cases of facing "Error: Over Voltage", you need to select the "Input" with the bigger "Max Voltage" from "Voltage Measurement Mode" section.

Voltage Measurement Mode:

Voltage Measurement	Max Voltage	Max Resistance
☐ Bin 01	up to 8V	R <62.50 mΩ
☐ Bin 01	up to 4.5V	R <31.25 mΩ
☒ Bin 10	up to 200mV	R <1.562 mΩ

Figure 8

Fourth: if you wish to modify wiring or use binaries other than "1" and "10", first you need to check "Don't Change Hardware Setting" and then apply the desired hardware modifications.

Test Setting

I_{Test}:

State Time:

☒ at Calibration state

☒ Don't change hardware settings

Figure 9

Fifth: "at Calibration State" option is used to remove the ambient noise effect from the voltage of the binaries. If this option is checked, in the first "State" the voltage is measured and deducted from the final result.



Figure 10

[jg1]Contact_Resistance_test