



VEBKO ONLINE HELP

Analog Out Tab

Category	tester
Section	AMT Sequencer Module
Language	English
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In the beginning of this video, we close the “Measurement View” window and change the size of other windows. In “State Type” section, the type of “State” is selected from the “State Type” dropdown field and in the “State Name” field a name (Vebko) is selected for the “State”.

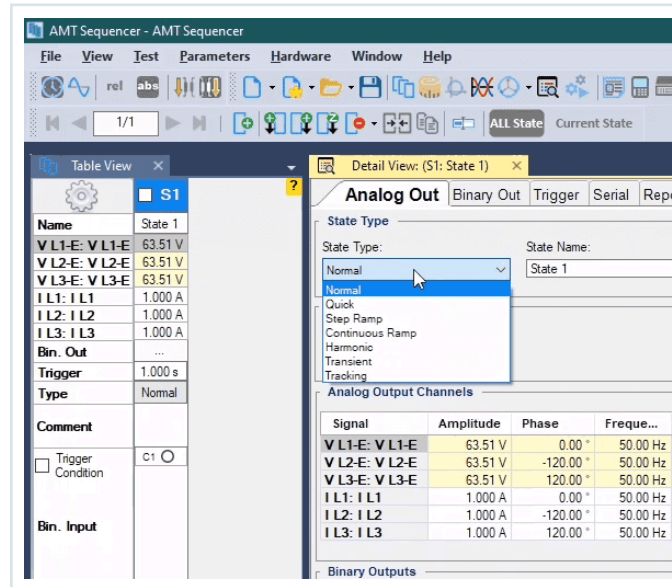


Figure 1

In “Set Mode and Fault Type” section, the outputs of the device are specified according to parameters and types of faults. For example, in “Direct” mode, the output voltage and current of the device are determined directly but in “Line-Line” mode, the user specifies values of the line voltage and the zero sequence voltage, and the device produces the output voltage and current values in accordance with those other values. It should be noted that in this video, the instruction is done in “Direct” mode and descriptions about different “Set Modes” will be provided in future videos.

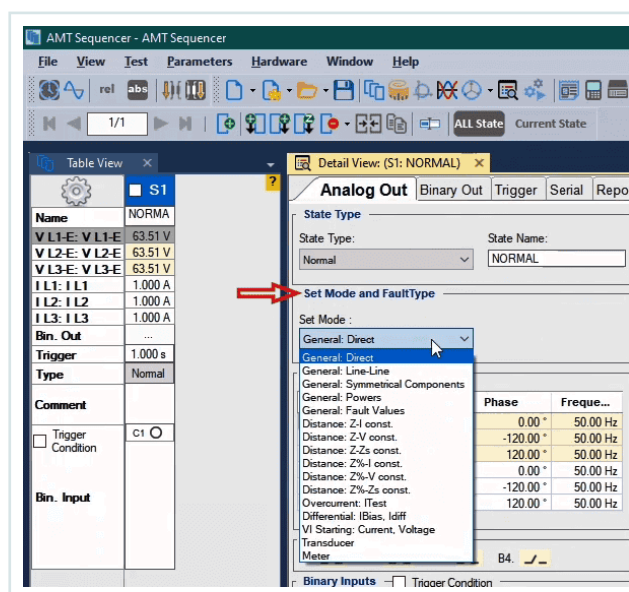


Figure 2

In “Binary Outputs” box, the state of binary Outputs of the device are specified where the user can enable or disable any binary according to the condition of the test. Moreover, from the “Binary Out” tab the user can adjust the settings related to binary Outputs in more details.

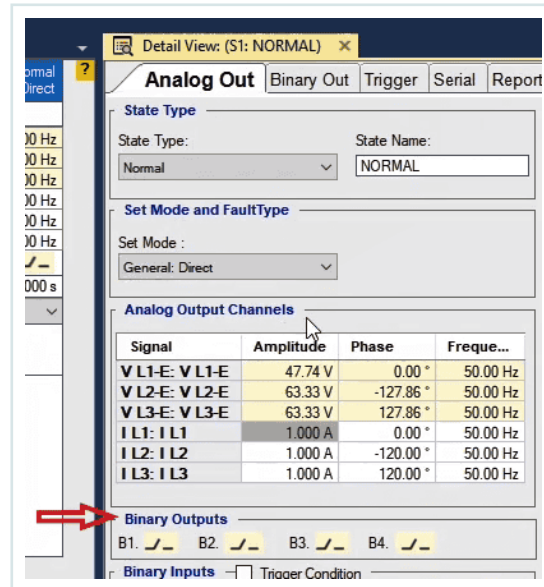


Figure 3

In “Binary Inputs” section, the state of active binaries of the device and the reception time of contact is specified. “Trigger setting” section: In “Comment” field, the user can add a note about the current “State”. This note is, also, viewable from the “Table View” window, “Comment” field. In “State Termination” section, the user determines the conditions for termination of the current “State” and initiation of the next “State”. In “Timeout” field, the signal injection time is determined by the user and after that the test ends or goes to the next “State”.

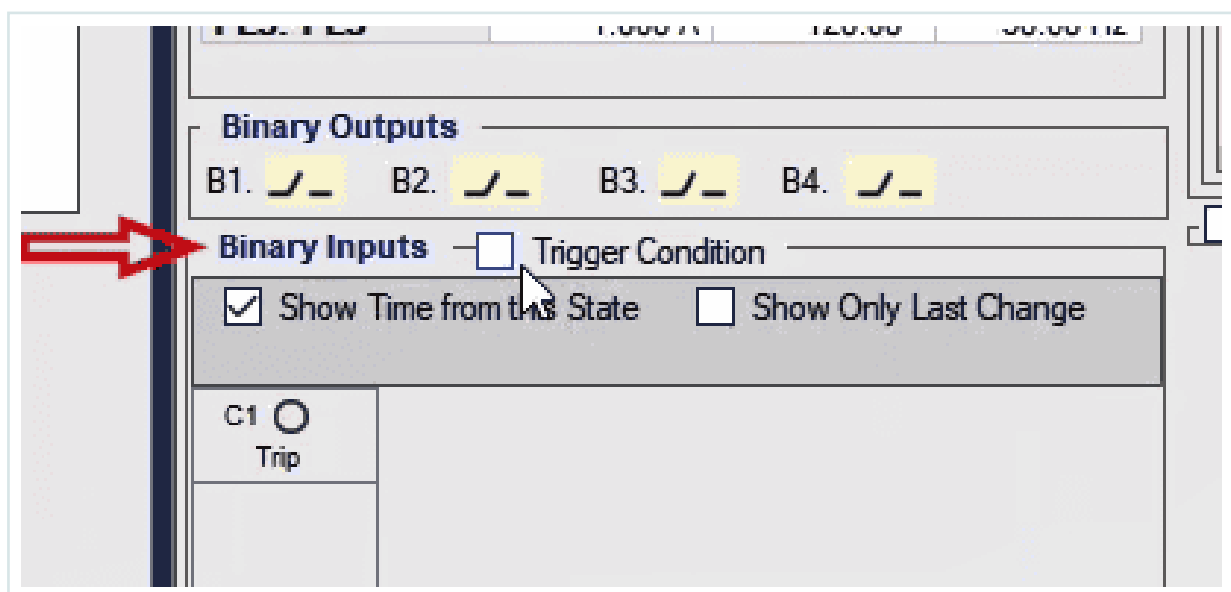


Figure 4

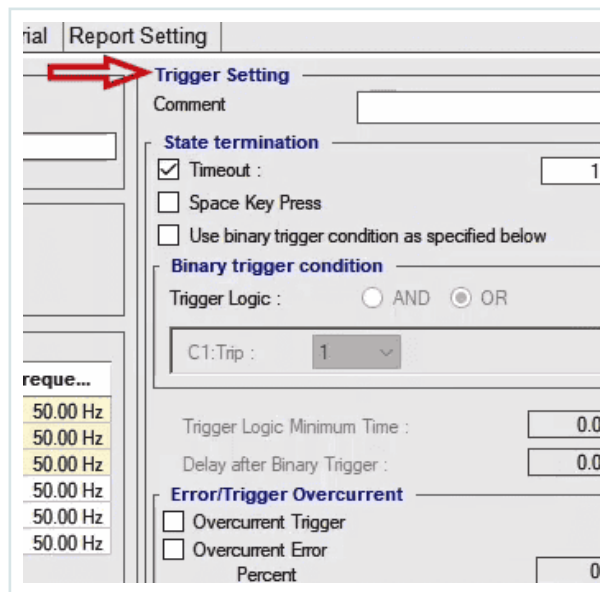


Figure 5

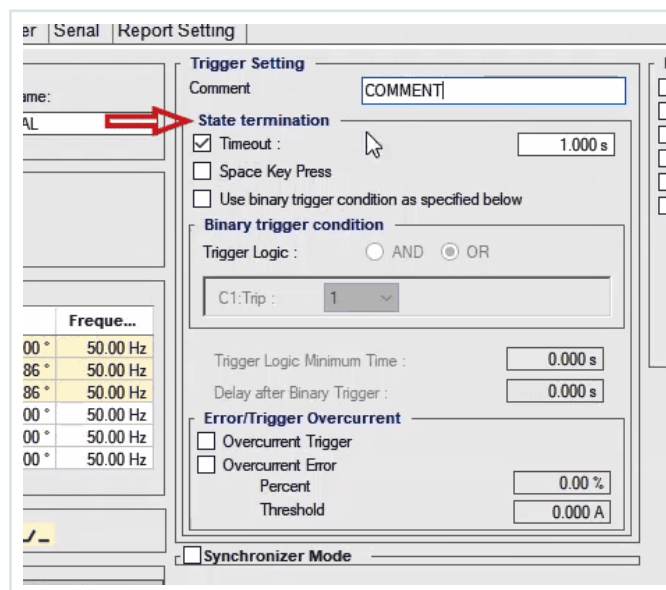


Figure 6

If the user wishes to specify conditions to terminate the current “State” according to reception of “Pickup” and “Trip” signals from the relay, they need to use the “Use binary trigger condition as specified below” option. To do this, first, the needed binaries should be enabled from the “Hardware Configuration” page. Then, in “Binary Trigger Condition” section, the condition of each binary for terminating the current “State” is specified. The conditions that the user can use are mentioned in the slide bar in front of each contact.

Condition “0”, no contact has been received by the binary. Condition “1”, the binary, has received “Pick Up” or “Trip” contact. Condition “0 -> 1”, the binary is first in “0” condition (no contact received) and then “Pick up” or “Trip” contact is received. In this condition, it is necessary for the binary to detect “0”

to "1" signal. Condition "1 -> 0", the binary is, at first, in condition "1" (contact received) and then the contact is removed from the binary. In this condition, it is necessary for the binary to detect "1" to "0" signal. Condition "1 -> 0". "0 -> 1", if the binary detects any of the conditions "0 -> 1" or "1 -> 0", the termination command of "State" is made. Condition "X" means there is no condition determined for "State" termination of this binary. It should be noted that if more than one condition is determined for "State" termination, the user needs to choose one logic from "AND" and "OR" logics from the "Trigger Logic" section to apply to the determined conditions. By using the "AND" logic, to terminate the "State" all conditions should be met while by using "OR" logic, if any of the conditions is met, the "State" is terminated.

It should be noted that all this setting can be adjusted in "Binary Inputs" box by checking "Trigger Condition". In this section in "Detail View" window, by checking "Show Time from this State" option, the contact reception time origin since the current "State" started is specified. Also, if you wish only for the last binaries state change to be displayed, check "Show only last change" and select one from among "1", "0" and "0&1" radio-buttons in accordance with your needs. "0&1" option displays the last state of zero and one. It should be reminded that in the default mode of the software, if the binary is open circuited, it means that no contact is received and when the two ends of the binary are short circuited it means that contact has been received. This setting can be adjusted by changing the value of each binary from "True" to "False" in "Reverse" column of the "Hardware Configuration" page.

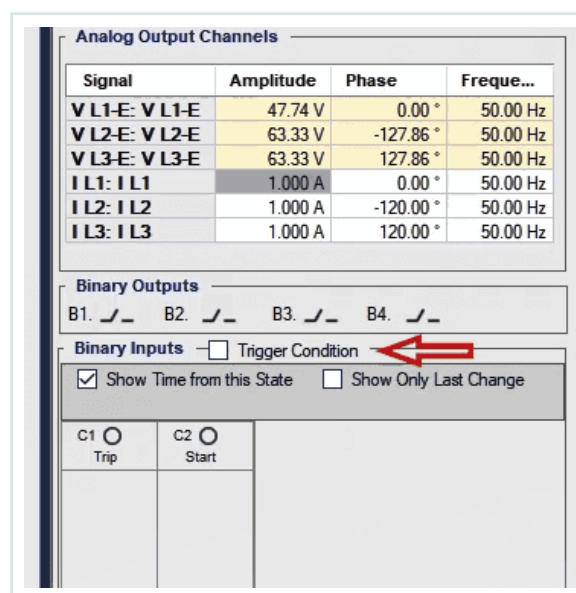


Figure 7

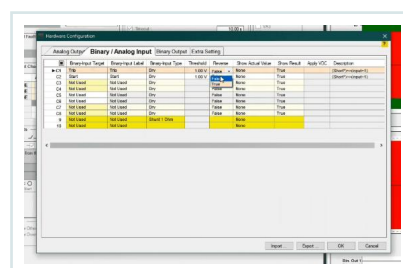


Figure 8

For example, from the "Hardware Configuration" window and "Binary / Analog Input", 6 binaries are selected with specific active "Targets". Then, in "Trigger" section, the conditions of the binary are set at "0", "1", "1" > - 0", 0 > - 1, 0 > - 1 . 1 > - 0 and X and "OR" is selected as the logic between them. In this case, by fulfilling any of condition, the current state is terminated but if "AND" logic is selected, all conditions must be fulfilled for the "State" to be terminated.

Note that in "State Termination" section, between "Time Out", "Space Key Press" and "Use Binary trigger condition as specified below" there is an "OR" logic and if they are selected simultaneously, if any of the conditions is fulfilled , the current "State" is terminated. By using "Trigger Logic Minimum Time", the user specifies that how long the determined condition should last for the "State" to be terminated. It should be noted that this feature only works on conditions "1" and "0".

In the field related to "Delay after Binary Trigger", the user makes a delay time between when the condition is fulfilled and when the "State" is terminated. For example, to simulate key performance delay, if 50 milliseconds is entered in this field, the current "State" is terminated after a 50 milliseconds delay and the key cutoff time is simulated. View videos of "Synchronizer Room" to see how "Synchronizer Mode" works.

In "Other Setting" section, by checking "Disable Error Other", errors of "Other" type are disabled in the current "State". Also, by checking "Disable Error Overvoltage of Binary", the "Overvoltage" errors of the analog binary inputs of the device are disabled in the current "State".

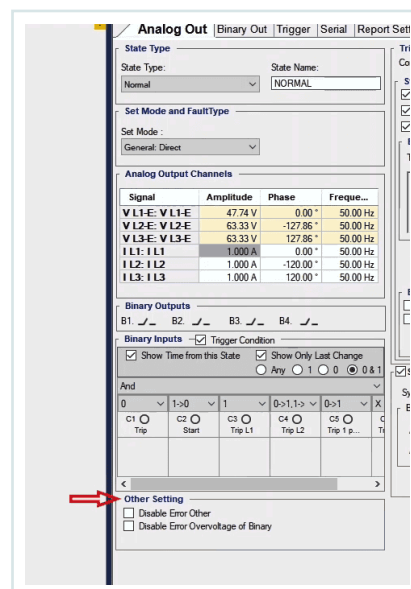


Figure 9

In the "Error/Trigger Overcurrent" box a condition for the software overcurrent error or the termination of the state in case high current extraction is specified. By selecting "Overcurrent trigger" if the current

extracted is more than 2A from the device, current state terminate. Therefore the software applies the next "state" and if it's the last "state" the test ends without giving any error message.

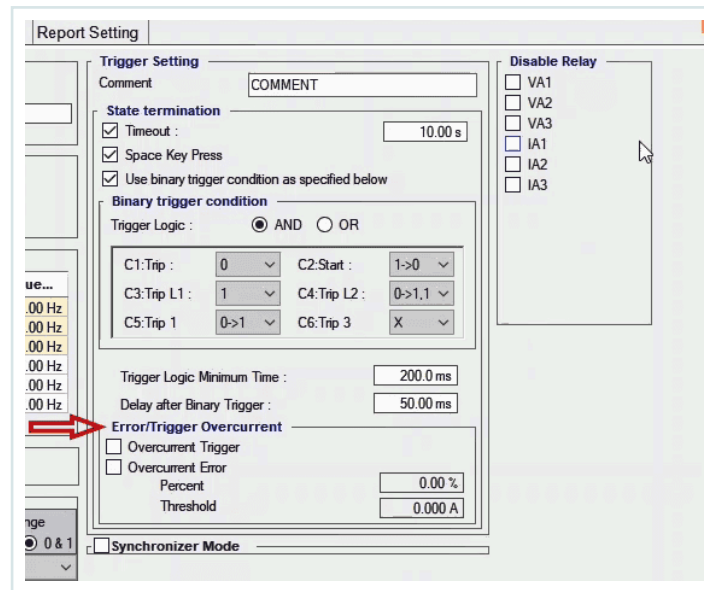


Figure 10

In "Overcurrent" section, the user adjusts the settings related to "Overcurrent" error of the outputs of the voltage outputs. Note that the maximum current of each output is 400 milliamps and 2amps in transient state. In the field related to "Percent Error Overcurrent", the maximum voltage output current is specified in percent and in the field related to "Threshold Error Overcurrent", the maximum output current is specified as a number for the "Overcurrent" error. For example, if in the "Percent Error Overcurrent" field 90 percent is entered, if the output current of the device reaches to 90 percent of the voltage output current, which is 1.8 amps, the device errors. Also, if in the "Threshold Error Overcurrent" field, 1 amps is entered, as soon as the current drawn from the voltage outputs exceeds 1 amps, the "Overcurrent" error is displayed and the test stops.

"Disable Relay" section: Generally, the device works in a way that there are relays embedded behind all current and voltage outputs of the device. Before the test, all amplifiers of the device are off and all relays are open. By "Running" the test, the amplifiers turn on in 20 milliseconds, then, for 20 milliseconds the device produces a 60 volts voltage and 5 amps current and then examines that there is no "Self-calibration" error. After that, for 20 milliseconds, zero current and voltage are produced behind the current and voltage outputs. After these steps, the relays close. Now, after 100 milliseconds, the voltage and current of the test are created. By doing this before the test, the device is isolated from any outside voltage. Also, the amplifiers are off and the device is silent.

By checking the box next to the title of every output in each "State", the related relay opens and no more voltage or current is sent to the outputs. For example, to test "Magnetic Balance" of the transformer, it is necessary to open circuit some wiring in some state which it is done by disabling the relay of the related phase in the device.



[jg1]Analog_out_tab