



TVB-2 Technical Specifications

MODEL	TVB-2	
Components	Resistor Specification	
120kΩ	2.5KVac / 50W / 2% +/- 50ppm	
1MΩ	3KVdc / 3W / 1% +/- 50ppm	
0.5Ω	350Vdc / 2W / 5% +/- 300ppm	
49mΩ	100Vdc / 50W / 1% +/- 50ppm	
100mΩ	100Vdc / 25W / 1% +/- 100ppm	
GENERAL		
Test Points	Test Condition	Specification
PASS ACW/DCW 2MΩ / 6W	1. ACW: 1240V, 10mA or DCW: 2121V, 5000uA 2. Maximum Voltage 2500V 3. Test duty cycle, OFF time = ON time x 2 4. Maximum ON time limit 30 seconds 5. Recommended 2s ramp time	2%
FAIL ACW/DCW 120kΩ / 50W	1. ACW: 1240V, 10mA or DCW: 2121V, 5000uA 2. Maximum Voltage 2300V 3. Test duty cycle, OFF time = ON time x 8 4. Maximum ON time limit 5 seconds 5. Recommended 2s ramp time	2%
PASS IR 4MΩ / 12W	1. IR: 500V, 2MΩ 2. Maximum Voltage: 2500V	2%
FAIL IR 1MΩ / 3W	1. IR: 500V, 2MΩ 2. Maximum Voltage 1000V	2%
PASS GC 0.5Ω / 2W	1. GC: 0.1A, 1Ω 2. Maximum Current 1A	5%
FAIL GC 2Ω / 8W		5%
PASS GB 50mΩ / 50W	1. GB: ≤ 30A, 100mΩ 2. Maximum Current 30A 3. Test duty cycle, OFF time = ON time x 6 4. Maximum ON time limit 5 seconds 5. Maximum resistance range at 30A is 200mΩ ¹	5%
FAIL GB 200mΩ / 50W	1. GB: ≤ 10A, 100mΩ 2. Maximum Current 10A 3. Test duty cycle, OFF time = ON time x 2 4. Maximum ON time limit 10 seconds 5. Maximum resistance range at 30A is 200mΩ ¹	3%
Environment	32° F - 104° F (0° - 40° C)	
Dimensions	7.3" (W) x 5.75" (L) x 2.95" (H) , 186mm x 146mm x 75 mm	
Weight	1.55 lbs	

¹**Note:**if the resistance is greater than 200mΩ you must reduce the test current to 10A in order to display the actual resistance reading.



General Information

The TVB-2 is a go/no-go load box for verifying that the failure detectors of your Slaughter electrical safety testing instrument are functioning properly. Use the TVB-2 daily before you begin performing Hipot, Insulation Resistance, Ground Bond and Ground Continuity tests.

Note: the trip setting may vary up to 10% of the set value based on the combined tolerances of the instrument and the components used in the TVB-2.

Using the TVB-2

The TVB-2 load box consists of resistors of varying types that induce a PASS or FAIL condition depending on the test parameters that are set in your electrical safety tester. The 8 banana jacks located on the top of the box can be used to apply the corresponding load to the output of your tester. Each banana jack should be used for a particular type of test, which is outlined on the layout of the load box.

To setup a test, connect the high voltage or high current test lead of your electrical safety tester to one of the GC, GB, ACW/DCW, or IR test points. Connect the return lead to the Return point. Ensure that the settings on your electrical safety tester are less than or equal to the maximum recommended voltage, current and duty cycle settings of the TVB-2. When all connections have been made, press the TEST button to begin the test. With the correct settings entered into the electrical safety tester, connecting the output leads to a PASS terminal should result in a PASS. Connecting the output leads to a FAIL terminal should result in a FAIL.

Note: pay close attention to the maximum voltage and duty cycle limitations of each resistor. Applying voltages that are higher than the recommended maximum setting or duty cycles greater than indicated can cause damage to the TVB-2.

Recommended Test Parameter Conditions

The following table illustrates the resistor values and recommended test parameter settings for each type of test. Pay close attention to the duty cycle limitations in the specifications in order to avoid damaging the TVB-2 load box.

	ACW	DCW	IR	GC	GB
PASS	2MΩ	2MΩ	4MΩ	500mΩ	50mΩ
FAIL	120kΩ	120kΩ	1MΩ	2Ω	200mΩ
Instrument Settings	1240V 10mA	2121V 5000uA	500V 2MOhm	1Ω	30A 100mΩ
Ramp	2s	2s	N/A	N/A	N/A