

# PUTON<sup>®</sup> Surge Tester ST Series



## Introduction

The surge tester is an essential instrument for testing winding products such as transformers, motors, rotors, stators, electric valves, generators, and all kinds of coils. It provides the ideal test method to detect the insulation faults.

It uses high-speed sampling technology, which is able to store the waveform of the standard / master coil and DUT (device under test) in the instrument. By comparing the waveform between the master and DUT, the faults can be found easily. Moreover, the innovation function of the ideal coil waveform can be displayed as the master, and the inductance value can be calculated for the partial discharge, which makes it particularly important for production and quality control.

## Match High Voltage Matrix Controller

The HMC High Voltage Matrix Controller is primarily designed to be used in conjunction with the TPM three-phase motor judgment mode inside the ST series pulse coil tester. With just one operation, users can complete comprehensive comparative testing of three-phase motors, saving time and effort.

Additionally, there are other models that support up to 10-hole outputs, allowing for various combinations with external low-resistance meters and high-voltage meters.

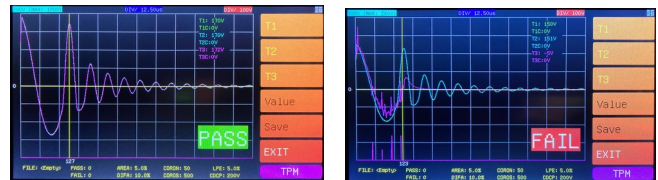
After conducting sampling tests for three different phases, T1~T3, the results can be displayed in textual format (Value) and graphical format (Waveform) for analysis purposes, aiding in determining the condition of the motor.

### 1. Value Text Display Result

From left to right, it displays the comparison results between T1 and T2, T2 and T3, and T3 and T1, respectively. Each section shows the following: A: area sum, D: area difference, N: corona discharge count, S: corona discharge level, L: inductance percentage error, P: corona discharge waveform detection, both inductance values, and the comparison result of the section.

### 2. Waveform Graph Display Result

The screen will simultaneously display the waveform results and corona discharge results of T1, T2, and T3. T1 is represented by green, T2 by cyan, and T3 by magenta. By using the touchscreen cursor or shuttle keys, you can view the parameter values of specified points in the waveform.



If the results of each item fall within the threshold range, the text will be displayed in black, and the section background color will be green, indicating a pass. If the results exceed the threshold range, the text will be displayed in yellow, and the section background color will be red, indicating a fail.

The overall comparison result will be displayed in the bottom right corner of the screen, showing a green "PASS" if the comparison is successful, or a red "FAIL" if it is unsuccessful.

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## Specifications



Type	ST-6KL	ST-6KB	ST-6K	ST-10K	HMC-330
<b>Test Voltage</b>	200V ~ 6,000V(±3%), 100V step	200V ~ 6,000V(±3%), 100V step	200V ~ 6,000V(±3%), 100V step	500V ~ 10,000V(±3%), 100V step	-
<b>Output energy</b>	Max 0.4J	Max 0.4J	Max 0.4J	Max 1.1J	-
<b>Inductance Range of Test Coil</b>	10μH Above	10μH Above	10μH Above	10μH Above	-
<b>Sampling Rate</b>	8bit/10ns (100MHz)	8bit/5ns (200MHz)	12bit/5ns (200MHz)	12bit/5ns (200MHz)	-
<b>Input Resistance</b>	10MΩ	10MΩ	10MΩ	10MΩ	-
<b>Display</b>	800 x 480 · 7" touch TFT-LCD				Color LCD
<b>Waveform Types</b>	Reference waveform , Test waveform , Corona discharge waveform				-
<b>Waveform type and measurement</b>	Area Size Comparison(AREA) , DiffZone Comparison, (DIF) Comparison Corona Number Comparison (CORON) , Corona Amount (COROS) Lenz Percent Error (LPE) , Corona Discharge Current Pulse (CDCP)				-
<b>Judgment Modes</b>	[Test] Coil Mode 、 [TPM] Three-Phase Motor Mode				Single-phase coil sample comparison mode, three-phase coil sample comparison mode, three-phase motor self-comparison mode.
<b>Storage Waveforms</b>	Internal 20 sets, external USB available for CSV format				-
<b>Comparison Output</b>	Pass/Fail display , Buzzer				Pass/Fail display , Buzzer
<b>Communication</b>	RS-232, I/O, TCP/IP				I/O
<b>Operation Temperature</b>	0°C ~ 40°C (32°F~104°F)				0°C ~ 40°C (32°F~104°F)
<b>Channel</b>	-	-	-	-	3 channels (U/V/W)
<b>Withstand voltage</b>	-	-	-	-	10KV
<b>Applicable Model</b>	-	-	-	-	ST-6KL/ST-6KB/ST-6K
<b>Voltage , Frequency</b>	AC100V/240V,50/60 Hz				AC100V/240V,50/60 Hz
<b>Dimension L x W x H</b>	340 × 328.4 × 167.08 mm				340 × 328.4 × 100 mm
<b>Weight</b>	6.4Kg				4Kg
<b>Application</b>	Electric vehicle motor power inductors, power chokes, transformers, inductors, coils, winding product manufacturers, winding component IQC				-
<b>Standard Accessories</b>	Main unit x1,High voltage test line x1,AC power cord x1				Main unit x1, High voltage test line x3
<b>Optional Accessories</b>	RS-232 to USB cable x1,Ethernet cable x1 ,foot switch x1				-

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