ST-6K

Surge Tester / Impulse Winding Tester



About

1. Inductance range is above $10 \mu \text{H}.$

2. Programmable pulse test voltage range is 200V $\sim\!6000V$, using non-destructive testing without damaging the coil.

3. Provides Partial discharge detection capability.

- 4. Provides 6 methods for comparision:
- a. area sum b. area difference
- c. corona discharge amount, d. corona discharge number,

e.Inductance value percentage error,

- f. corona discharge waveform detection.
- 5. Able to calcuate and display the Ideal coil waveform.
- 6. Displays of reference waveform, test waveform and corona discharge waveform.



About

7. prvides 12bit / 5ns measurement which improve the analysis sensitivity.

8. Pass/Fail results are displayed directly on the screen, which is convenient, concise and easy to judge.

 Measurement functions of voltage, frequency, time, etc., and the data can be used for back-end analysis and research
ST-6K can store 20 sets of sample waveforms internally,

and external USB can store additional waveforms (waveform capacity 4.2KB).

11. 7-inch human-machine interface touch screen selection form, easy to operate.

12. Equipped with RS-232 and TCP/IP transmission interfaces that can be connected to the PC to facilitate data collection, transmission and programming to establish the required test system.



About

13. Equipped with external I/O connected by D-Sub 15PIN Connector, the operator can use it to connect to the factory's automatic or semi-automatic test platform.

14. Very suitable to electric vehicle motor testing.

15. The inductance value can be displayed, and the inductance value can also be input to display the ideal waveform.

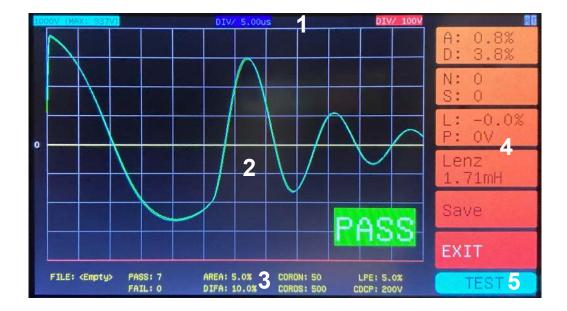
16. Provides one-button continuous discharge function.

17. It has the function of automatically finding the best DIV with one click and suggesting voltage levels.

18. Porvides the short circuit and leakage tests.



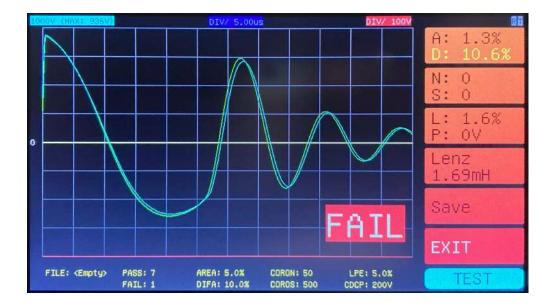
Display



Unit of each axis
Waveform results
Comparison threshold

- 4. Function buttons
- 5. Status mode

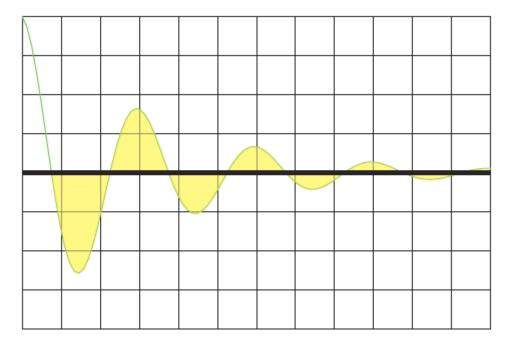
Ideal-L – Ideal Reference Waveform



- The ideal inductance value can be set by yourself.
- Waveforms and samples are displayed overlaid and compared.
- Calculate the oscillation frequency and oscillation period results.

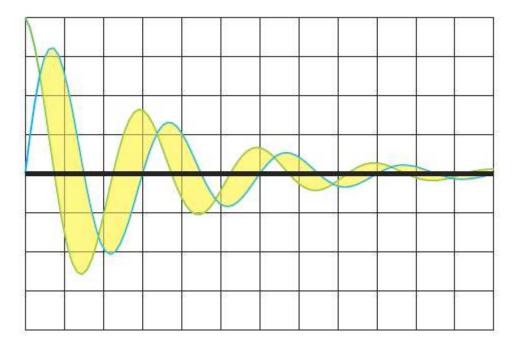
1. Area Sum (AREA)

- Calculate the difference in the sum of the areas within the specified interval of L-R.
- The comparison results are displayed in %.



2. Area Difference (DIFA)

- Calculate the difference in area difference within the specified interval of L-R.
- The comparison results are displayed in %.



3. Corona Discharge Number CORON) Corona Discharge Amount (COROS)

- Obtain the number and total amount of corona discharge through differential calculation.
- Determine the degree of damage to the device under test and the discharge curve.
- The comparison results are displayed in quantities.



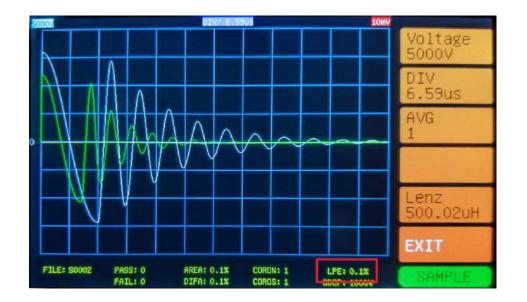
4. Lenz Percent Error (LPE)

- Calculate the inductance value of the sample and the device under test, and compare the percentage error to compare the degree of difference.
- The comparison results are displayed in %.
- Example:

Sample Lenz: 90H

Test Lenz: 81H

LPE(%) = |90 - 81| ÷ 90 × 100% = **10%**



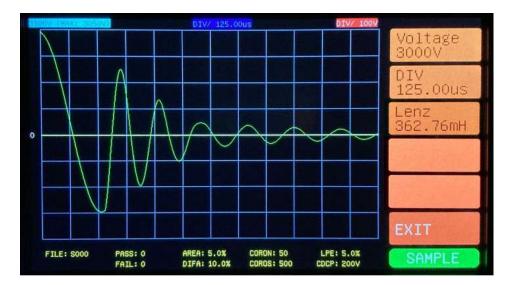
5.Corona Discharge Current Pulse (CDCP)

- Make judgments and comparisons based on the set corona maximum threshold range.
- The display range can be adjusted arbitrarily according to the size of the corona for zoom viewing.
- The comparison results are displayed in voltage (V) as the unit.



Automatically search for the best sampling rate gear

- Automatically search for the best displayed sampling gear results step by step in 250ns ~ 25ms.
- When the sampling result is a waveform without the automatic search function and the oscillation attenuation display is incomplete, there will still be a suggested gear prompt.



High-Voltage Matrix Controller

- The HMC high-voltage matrix controller is mainly used with the TPM three-phase motor judgment. The user only needs to perform a single operation to complete a comprehensive comparison test of the three-phase motor, saving time.
- There are other models that can support up to 10 output holes, and can be connected to multiple combinations of external lowresistance meters and high-voltage Insulation tester.
- After conducting sampling tests of three different phases from T1 to T3, the Value text display results and Waveform graphic display results can be used as analysis status to judge the quality of the motor.



TPM Illustrate

1. Value: Text Disply Result

THE WAR IS V	019/12.500	519751009	
T1:T2	T2:T3	T3 T1	TI
A:0.0%	A:0.4%	A:0.4%	
D:3.2%	D:3.3%	D:3.5%	12
N:0	N = 0	N:0	
S:0	S:0	S:0	TB
° L:-0.0%	L:-0.0%	L:-0.0%	
P:0V	P:0V	P:0V	Waveform
T1:1.46mH	T2:1.46mH	T3:1.46mH	
T2:1.46mH	T3:1.46mH	T1:1.46mH	Save
PASS	PASS	PASS	
			EXIT
	55:0 AREA: 5.0% IL:0 DIFA: 10.0%	CGRON: 50 LPE: 5.0% CGROS: 500 CDCP: 200V	TPM

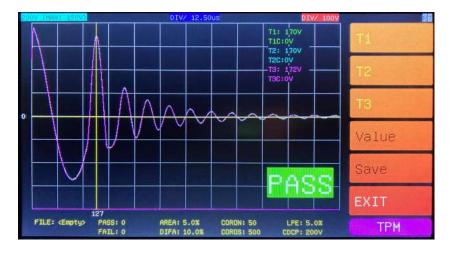
• The 3 blocks are displayed from left to right: the comparison results between T1 and T2, the comparison results between T2 and T3, and the comparison results between T3 and T1.

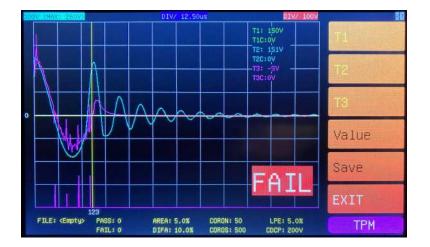
WAXE ROOM	01W 12.50us	D DV/ 100V	
T1:T2	T2: T3	T3:T1	TI
A:0.0%	A:61.3%	A:61.3%	
D:3.4%	D:48.1%	_D:79.4% _	T2
N:O	N:1	N:0	
S:0-	S:139	S:0	TO
L:-0.0%	L:135.1%	-L:57.5% -	
P:0V	P:139V	P:0V	Waveform
T1:1.46mH	T2:1.46mH	T3:3.43mH	Constant of Parket and Inco
T2:1.46mH	T3:3.43mH	T1:1.46mH	Save
PASS	FAIL	FAIL	and all and a second
			EXIT
FILE: (Empty) PASS: FAIL:		CDRON: 50 LPE: 5.0% CDROS: 500 CDCP: 200V	TPM

 A: Area sum, D: area difference, N: corona number, S: corona amount, L: inductance percentage error, P: corona waveform detection, the two inductance values, and the comparison results of the block are displayed respectively.

TPM Illustrate

2. Waveform: Graph Disply Result





• The screen will display T1, T2, T3 waveform results and corona results at the same time. T1 is green, T2 is cyan, and T3 is magenta. You can touch the cursor position or the shuttle key on the screen to view the parameters of the specified point in the waveform. value.

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