AUTOMATIC WINDING TEST SYSTEM

(Impulse, AC/DC Hi-Pot, IR, Inductances & DC Resistance Winding Tester)



Pioneer In Test Automation



Multi Channel Motor Tester

Note: Equipment may look different from the above

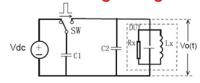
Brief Introduction:

Motor Winding Tester is the latest microprocessor based intelligent tester, with multiple test functions and with Six or Twelve channels. With this Equipment we can measure Impulse Test (Inter Turn or Layer Short), AC/DC Withstanding Test (Hi-Pot), Insulation Resistance Test (IR), Inductance Test (L), DC Resistance Test (Rdc) on any Motor Winding, Alternator Winding, Fan Motor Winding. It has user friendly operation for ease in using and for fast testing speed.

Theory of Impulse Test:

The impulse winding tester tests the electrical characteristics of coil winding without damaging the DUT. The prerequisite conditions for quality of a coil can be detected at just a glance. The detection is carried out when the same electric impulse by capacitor discharge is applied to the standard and the DUT. The voltage decay waveform is generated in response to the impulse, related to the Q-factor and inductance of the coil. In this sense, the tester can detect turn & layer short, the differences in the number of turns and the material of the core. If high impulse voltage is applied, the poor insulation will appear as a corona or layer discharge.

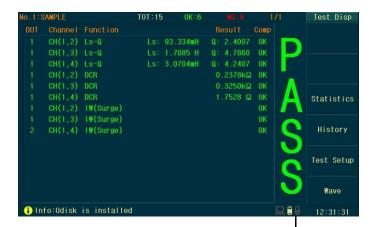
Decay Curve of winding Voltage:





Main Functions:

- High Display Resolution with 800x480 , 7" TFT Display
- Test Functions: AC/DC Hipot, IR, Impulse Test (IW), DC Resistance (Rdc), Inductance (L)
- Programmable Multi-Channel (6) Scanning Test
- Four Terminal Measurement for Rdc & L
- Low energy test without damaging the coil
- 4 kinds of waveform comparison methods
- Friendly user's interface and easy operation
- Direct display of comparison result
- Keyboard lock and password protection function
- Optional Handler Interface
- Max. Test Voltage Range is 500V ~ 5KV



Other Functions:

Test channels		6 Channels
Detection Output		PASS / FAIL display with LED light & Beep Alarm
Vlemory	Internal	180 groups (standard waveform data and test setup parameters)
	U-disk	600 groups
Optional Interface		HANDLER (START, STOP, PASS, FAIL, EOM) USB Host (support storage of BMP, GIF, PNG image files and firmware upgrade)

AUTOMATIC WINDING TEST SYSTEM (Impulse, AC/DC Hi-Pot, IR, Inductances & DC Resistance Winding Tester)

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Specification:

DC Resistance Measurement (Rdc) :			
Range	$5m\Omega \sim 20k\Omega$ (four-wire measurement)		
Basic accuracy	$5m\Omega \sim 200m\Omega$ ± $(0.5\% \pm 0.5m\Omega)$ $200m\Omega \sim 20k\Omega$ ± $(0.3\% \pm 5m\Omega)$		
Inductance Measurement (L) :			
Test parameter	Ls, Lp		
Test frequency	50Hz, 60Hz, 100Hz, 120Hz, 1kHz, 10kHz, 20kHz, 40kHz, 50kHz, 100kHz		
Test level	0.1V, 0.3V, 1.0V		
Output Impedance	100Ω		
Basic Accuracy	<u>+</u> 0.3%		
Measurement display range	0.001uH~9.9999kH		
Insulation Resistance Test (IR):			
Out-out Voltage	0.100kV ~ 1.000kV ±(1.5% of reading + 5 counts)		
Resistance Measurement Range	1MΩ ~ 10GΩ		
Test Time	0.3s ~ 999.9s		
Accuracy	<pre><500V 1 MOhm ~1GOhm : ± (10% of reading ± 5 counts) >=500V 1 MOhm ~1GOhm : ± (5% of reading ± 5 counts) 1GOhm ~10 GOhm : ± (10% of reading ± 5 counts)</pre>		
AC / DC Withstanding Test (Hi-Pot) :			
Output-Voltage Range	AC: 0.050kV~5.000kV (±3% of reading ± 5 digits) DC: 0.050kV~6.000kV (±3% of reading ± 5 digits)		
Current Measurement Range	AC: 0~30mA DC: 0~10mA		
ARC Detect	AC: 1mA ~ 15mA DC: 1mA ~ 10mA		
Test Time	0.3s~999.9s		
Accuracy	± 3%		
Impulse Winding Test :			
Impulse voltage	100V~5000V @ Steps of 10V step (±5% ± 10V)		
Comparison methods	Area, Differential Area, Corona and Differential Phase		
Test repeated accuracy	2%		