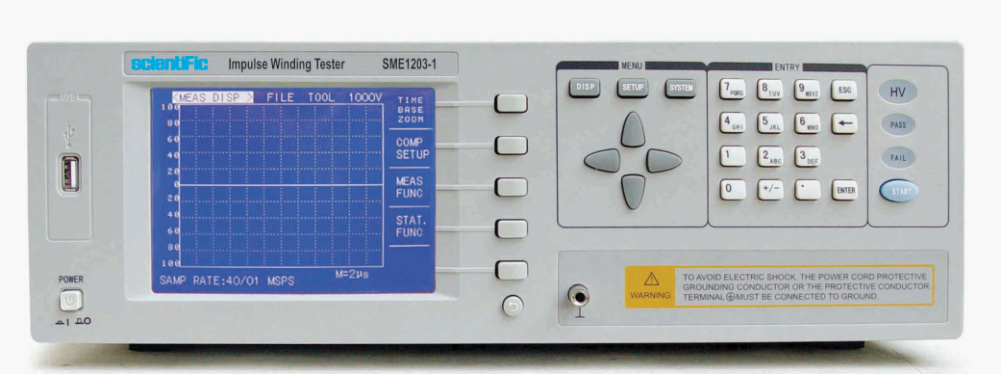
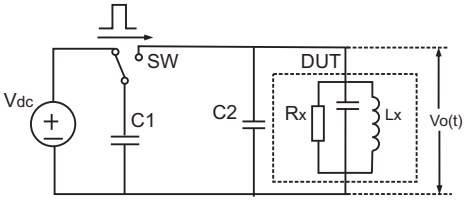
Impulse Winding Tester
SME1203-1

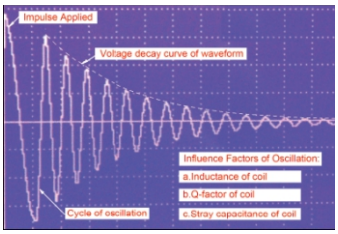


Advance Features

- Low inductance impulse test: down to 10 µH
- Low energy test without damaging the coil
- Fast detection of winding insulation at 5.5 Meas/sec
- 4 kinds of waveform comparison methods
- Up to 40 MSPS sampling rate
- 320×240 dot-matrix graphic LCD display
- Multi-trigger mode programmable
- Voltage, Time & Frequency measuring functions
- Direct display of comparison result
- Keyboard lock & password protection function
- Handler, RS-232C interface
- 500 groups of waveforms can be stored in external USB disc.

Due to the influence of coil wire material, magnetic material, framework & manufacture techniques etc ., coil products (such as transformers, motors, etc.) may have defects of low insulation between coil layers, circles & leads. SME1203-1 impulse winding tester, adopting high speed sampling technique, is a new generation analysis test instrument for insulation performance of coil products.
When testing, SME1203-1compares the standard waveform stored in the instrument with current measuring waveform. SME1203-1 gives the PASS or FAIL comparison result according to Area, Differential Area, Corona Discharge, Differential Phase etc. with strong function, precision test method, flexible operation & various interfaces, SME1203-1 can provide test solution for most coil winding products.





The Decay curve of winding voltage

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 & the DUT. The voltage decay waveform is generated in response to the impulse, related to the Q-factor & inductance of the coil. In this sense, the tester can detect turn & layer short, the differences in the number of turns & the material of the core. If high impulse voltage is applied, the poor insulation will appear as a corona or layer discharge.

Technical Specifications	SME1203-1
No. of channels	Single
Output Impulse Voltage	300 V to 3000 V, 50 V Steps
Accuracy	± 5% of set value ± 15 V
Voltage Control Mode	
Normal	Voltage programmable at the measurement terminals when terminals opened
Constant	Maintaining selected voltage across the winding independent of changes of the winding impedance
Impulse Energy (1 kΩ Resistive Load)	≤ Max 90 milli-Joules
Inductance Range	≥ 10 More than 10 µH
Waveform Sampling	
Sampling Rate	40 MSPS / 25 ns, 20 MSPS / 50 ns,10 MSPS / 100 ns, 5 MSPS / 200 ns,
	2.5 MSPS / 400 ns,1.25 MSPS / 800 ns, 625 kSPS / 1.6 µs, 312 kSPS / 3.2 µs
Resolution	8 digit
Sampling Length	960 Bytes
Input Impedance	10 MΩ (Resistive Voltage Divider)
Measuring Speed	5.5 times/sec (Waveform display OFF, PASS / FAIL ON), 3.3 times/sec (Waveform display ON, PASS / FAIL ON)
Average Rate	1 to 99, Programmable
Waveform Measurement	Voltage, Time, Frequency
Trigger Mode	Internal / Manual (foot) / External/ BUS
Comparison Mode	Area Size Comparison, Differential Area Comparison, Corona Discharge, Differential Phase Comparison
Area Size Repetition Accuracy	± 1%
Differential Area Size Repetition Accuracy	± 1%
Detection Output	PASS / FAIL Display, Alarm
Alarm Volume	Long High, Long Low, Single Low, Double Low, Off
Memory	60 groups of standard waveform data can be stored in internal non-volatile memory
	500 groups in external USB disc
Interface	HANDLER (Start , Stop, Pass NG, Busy, EOC, etc.), RS232C, GPIB (Optional)
General Information	
Display	
Screen Mode	320 x 240 dots LCD
Waveform Display Dots	240 x 200 dots
Display Information	Setting parameter , Standard & measuring waveform, Measurement & comparison result
Supply	230 V ± 10 %, 50 Hz AC
Power Consumption	≤ 40 VA
Operating Conditions	0˚C to 40˚C, ≤ 95% RH
Dimensions	W: 395, H:155, D:445 mm
Weight	7.6 kg (Approx.)
Standard Accessories	Mains Cord, High-voltage test clip leads (SMA26035), Foot Switch (SMA2881-001), CD

Subject to change

SMA26035

SMA2881-001

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