Features

- Expands the range of Capacitance and Dissipation Factor for MTAND unit
- Capable of tuning capacitance up to 1.2 µF at 50 Hz and 1.0 µF at 60 Hz
- Smooth hand crank tuning wheels.
- Heavy-duty rubber Wheels for easy handling.
- Rugged design to withstand rigors of transportation and field operations.
- Capable of testing large capacitive loads, including power cables, high rating motors, and generators.

RESONATING INDUCTOR

Capacitance Range Extender

The Resonating Inductor is a high-performance accessory designed to enhance the capabilities of the MTAND 12-kV Automated Insulation Test Set by extending its range for capacitance and dissipation factor testing. By compensating for reactive power, it ensures precise and stable testing of large capacitive loads, including power cables, high-rating motors, and generators.

Connected in parallel with the test set's internal power supply, the Resonating Inductor significantly increases its capacity, allowing it to handle larger test samples efficiently. It extends the short-time rating of the power supply up to 4A, making it suitable for testing capacitance loads up to 1.2 µF at 50 Hz and 1.0 µF at 60 Hz. A manual tuning wheel enables fine adjustment of inductance, optimizing the circuit for minimal load current and improved test accuracy.

With its enhanced performance and extended testing range, the Resonating Inductor is an essential tool for professionals conducting high-voltage insulation assessments on large electrical equipment.

Applications

The Resonating Inductor is an advanced solution designed to extend the testing capabilities of the MTAND 12-kV Automated Insulation Test Set, particularly for high-capacitance applications. Its ability to compensate for reactive power makes it ideal for the following applications:

High-Voltage Power Cable Testing - Enables precise and stable testing of capacitance and dissipation factor in power cables, ensuring accurate performance diagnostics.

Insulation Testing for Motors and Generators – Expands testing capacity for high-rated rotating machines, ensuring reliable insulation performance under high-voltage conditions.

Dissipation factor testing also can be performed on transformers, bushings, circuit breakers, insulators, capacitors, surge arresters, insulating liquids or any other type of equipment that contains electrical insulation.

The Resonating Inductor is an indispensable tool in the electrical testing industry, offering enhanced testing range, improved safety, and greater precision in high-voltage insulation evaluations.

Technical Details

Resonating Inductor Series

	RI-2A	RI-4A
ELECTRICAL		
Voltage Rating	10 kV AC	
Current rating at 50 Hz/60 Hz	2.00A	3.77A
Duty Cycle	10 minutes ON, 30 minutes OFF	15 minutes ON, 2 hours OFF
Maximum capacitive load	up to 0.65μF at 50 Hz and 0.56μF at 60 Hz	up to 1.2μF at 50 Hz and 1.0μF at 60 Hz
Minimum capacitive load	0.05 μF at 50 Hz/60 Hz	
Tuning	By manual tuning wheel	
Test modes	UST (ungrounded specimen test) and GST (grounded specimen test); in both these test configurations, the Resonating Inductor does not affect the accuracy specification of the test set	
NOISE		
at 50 Hz	NA	88 to 96 dB, A weight (maximum to minimum load)
at 60 Hz	NA	75 to 94 dB, A weight (maximum to minimum load)
PHYSICAL CHARACTERISTICS		
Enclosure	Self-contained, air-insulated. The housing is a sturdy metal cabinet using welded construction throughout to withstand the rigors of transportation and field operation.	
Portability	Large wheels and handles are provided for convenience in transportation	
Dimensions (L x W x D) overall	800 mm X 1100 mm X 550 mm	905 mm x 1180 mm x 630 mm
Weight (approx)	140 kg	178 kg
ENVIRONMENTAL CONDITIONS		
Operating Temperature	0°C to +55°C	
Storage Temperature	-10°C to 50°C	
Relative Humidity	30% Rh to 95% (Non-Condensing)	

ACCESSORIES SUPPLIED

- **HV cable, 5 meter with connector and Heavy Alligator clip** — 01 No.
- **LV cable 5 meter with connector and heavy alligator clip** — 01 No.
- **Ground / Earth cable 5 meter with one end Clip and Small Alligator Clip** — 01 No.
- **User Manual & Test certificate** — 1 Set