Tender Specification for Winding Resistance Meter

1. Scope of Work

- Supply of a portable digital instrument for measuring winding resistance and very low resistance of inductive and resistive objects.
- Suitable for testing:
  - Power transformers (including amorphous core type)
  - Electric motors
  - Circuit breakers and contacts
  - Earthing conductors and equipotential bonding
  - Welded, soldered, and bolted connections
- Instrument must include transformer core demagnetization function.
- Provision for automatic temperature compensation using a temperature probe.
- The unit should be robust, dustproof, and waterproof for use in field conditions.

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2. Technical Specifications

Parameter	**Requirement**
Measurement Range & Resolution	0…999.9 μΩ (0.1 μΩ), 1.0000…1.9999 mΩ (0.0001 mΩ), 2.000…19.999 mΩ (0.001 mΩ), 20.00…199.99 mΩ (0.01 mΩ), 200.0…999.9 mΩ (0.1 mΩ), 1.0000…1.9999 Ω (0.0001 Ω), 2.000…19.999 Ω (0.001 Ω), 20.00…199.99 Ω (0.01 Ω), 200.0…1999.9 Ω (0.1 Ω)
Test Current	Selectable 10 A / 1 A / 0.1 A / 10 mA / 1 mA
Test current injection mode	-Auto, Continuous - Uni directional & Bi-Directional
Back EMF discharge	Automatic back EMF discharge should be there.
Core demagnetization	Should be available
Temperature Compensation Within the product (Not through software)	Copper, Aluminium, Tin, Steel, Silver, and customizable for other materials
Result	The product should show the corrected temperature reading and actual temperature reading
Accuracy	± (0.25% of measured value + 2 digits)
Graphical & Logging Functions	- Graphical Representation: Available for visualization of test results with the product display itself. - Logger Function: Logs results with configurable intervals (1s, 5s, 10s, 15s, 1min, 5min, 10min, 15min) and durations (1min, 5min, 10min, 15min, 30min).
Display	TFT colour touchscreen, resolution minimum 800 × 480 pixels
Interface	USB, LAN, and Wi-Fi connectivity Built-in help system with user guidance
Ingress Protection	Closed housing: IP67
Power Supply	**Should be mains & battery operated** & Battery charger input: 90–265 V AC, 50–60 Hz
Auto-Off Function	Should be available
Battery Charging Time	Approx. 3.5 hours
Max Wire Resistance for 10 A	300 mΩ

protection against external voltage	up to 600 Vac for 10 s
Category protection	CAT IV 300V (CAT III 600V)
Operating Temperature	-10 °C to +50 °C
Storage Temperature	-20 °C to +60 °C
Humidity	20%–90% RH
Dimensions	Approx. 318 × 257 × 152 mm
Weight	Not more than 3.5 kg
Standards Compliance	IEC/EN 61010-1, IEC/EN 61010-2-030 IEC/EN 60529, IEC/EN 61326-1:2013, IEC/EN 61326-2-2:2013, ISO 9001
Accessories	1. 3m double wire cable – 02 no's 2. Kelvin crocodile clips – 02 no's 3. Double pin kelvin probes – 02 no's 4. Power cord – 01 no 5. Temperature probe-01 no 6. Li-ion rechargeable battery (7.2V 8.8 AH) – 01 no 7. USB cable – 01 no 8. NABL calibration report – 01 no 9. Carrying case

3. After-Sale Support

- The supplier shall provide a **minimum one-year warranty** against manufacturing defects.
- Availability of **local service support** and **spare parts** for a minimum of 5 years after purchase.
- Supplier must provide **training** for operation, basic troubleshooting, and preventive maintenance.
- Calibration facility must be available within India with traceability to NABL standards.
- Technical support should be available via phone, email, or on-site visit within a reasonable response time.