

TX-1000A Intelligent Metal Resistivity Measuring

Instrument



1 Overview

TX-1000A intelligent metal conductor resistivity meter is a high-resolution and high-precision desktop model based on TX-300 series of intelligent resistivity meters. It can be used to measure the resistivity and conductivity of metal wires, bars and other materials, as well as the resistance and meter resistance of stranded wires and cables. It adopts current-voltage four-terminal measuring method, advanced electronic techniques, singlechip technique and automatic detection technology. Their performances completely accord with the technical requirements of GB/T3048.2 and GB/T3048.4. It is widely used in electric power, electric wire and cable industry, scientific research institutions, colleges and universities, and verification institutions at all levels.

2 Main features of the instrument

- measure the conductivity, resistivity, meter resistance and DC resistance of motor, transformer, etc. of the wire, pole and bar with the maximum diameter of 1-45mm.
- > The resolution of the instrument is up to 10-8 Ω (0.01 μ Ω), which ensures the measurement accuracy of the resistance and conductivity of the metal conductor with the maximum

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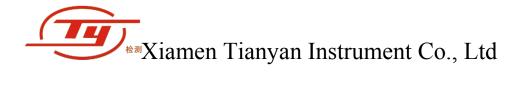
diameter up to Ø 45mm (sectional area up to 1589mm2).

- Configure high-precision (± 0.1 °C) temperature sensor or test fixture with high-precision conductor temperature sensor, greatly improving the accuracy of temperature automatic compensation in measurement.
- Combining advanced electronic, singlechip and automatic measurement techniques in one instrument, with superior automatic functions and simple operation.
- All measured numerical values can be obtained by just one press on the key without any calculation. The instrument is adequate for continuous, fast and accurate measurements.
- > AC power supply design, suitable for field use.
- With large screen and font. Can display measured values and auxiliary parameters at the same time, including resistivity, conductivity, resistance, temperature, measuring current and temperature compensation coefficient.
- The functions of automatic constant current selection, automatic current reversal, automatic zero point correction and automatic temperature compensation are maintained for every measurement, to guarantee the accuracy of measured value.
- Special portable four-terminal measuring fixture is suitable for fast measurements of different materials and the wire/bar with different standards.
- ➤ The build-in data accumulator can record and save 1000 groups of measuring data and parameters. Connecting it to the host computer, the complete report can be generated.
- Built in data memory can record and save 1000 sets of measurement data and parameters, and connect the upper computer to generate a complete report.

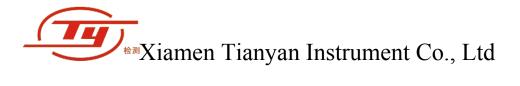
Parameter Item	Resistivity	Conductivity	Resistance
Measuring range	$0.01 \mu \Omega \cdot m \sim 2.5 \mu \Omega \cdot m$	0.4MS/m~100MS/m 0.69%IACS~172%IACS	0.1μΩ~150Ω
Resolution	$10^{-4} \sim 10^{-6} \mu \Omega \cdot m$	0.01~0.001%IACS	0.01μΩ (I=10A)

3 TX-1000A Main Parameters

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Precision	±0.25%	±0.25%	100μΩ~150Ω: ±0.15%	
Temperature measurement	$0^{\circ}C-55^{\circ}C$, Accuracy of $\pm 0.1^{\circ}C$			
Internal constant current of the instrument	$16\mu A$ level $\sim 10A$ level (automatic selection according to the measuring requirement)			
Wire/cable measuring fixture	privided 1000mm standard test fixture (Optional TXJ-300 / 150 / 240 / 630 / 1200 test fixture)or other non-standard test fixture with different size;			
Automatic temperature compensation	The measured value will be automatically compensated to the value at 20° C.			
Wire/cable measuring items	(1)Soild conductor resistivity ρ v,conductivity σ , resistance R,resistance per unit lengh R1, (2) resistivity, resistance pen unit leagh(Ω /m), Ω /km(typeB)			
Printout data	Date, time, temperature correction coefficient α , wire specifications, and all measured values of conductor and wire/cable			
Normal working environment	Temperature: $0^{\circ}C \sim +40^{\circ}C$; relative humidity: $0 \sim 80\%$			
Display	large screen LCD, which can simultaneously display multiple measurement parameters with backlight			
Power supply	220VAC ± 10%, 50-60Hz; power 160W			
Internal memory	Can save 1000 groups of measured data.			
PC communication mode	RS232 serial port			
Host size	350(W)*260(H)*200(D)			



Master machine shell	Aluminum alloy case
Packaging and protection	Master machine,test fixture,charge,communication cables,correction resistance,operation manual and a CD-ROM,Flush bonading printer,charger four-terminal resistance test clamp,temperature sensor ,and etc.