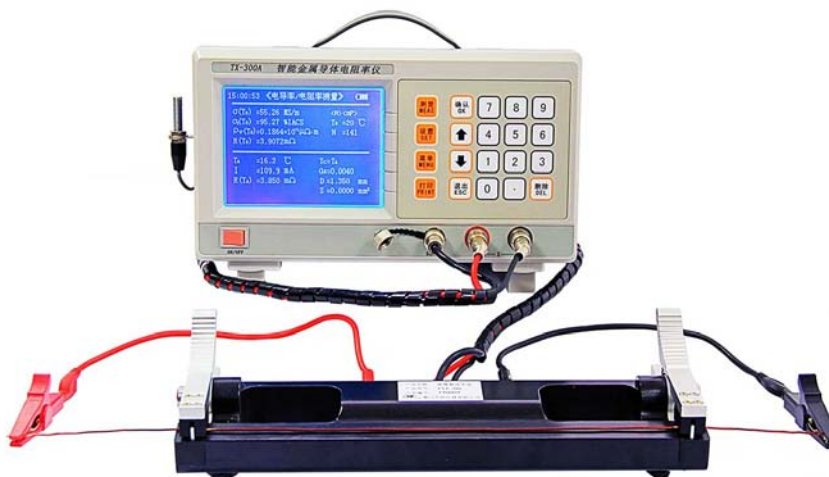




TX-300A Intelligent Metal Resistivity Measuring Instrument



TX-300 A, B series of intelligent metal conductor resistivity measuring instrument are patented products of our company. They are the only portable and fully automatic instruments in the world, for measuring resistivity and conductivity of wire and bar materials. The design of the high-tech products 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. The products can be widely applied in the fields of metallurgy, electric power and electrical engineering, wire and cable, electrical machines and equipments, colleges and universities, research institutes, etc.

Main features of the instrument

- 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.
- Battery power supply has small size thus easy to carry, suitable for indoor and open-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.



- One instrument has multiple applications, and has three measurement interfaces: interface of conductor resistivity/conductivity measurement, interface of wire/cable comprehensive parameter measurement and interface of wire/cable direct-current resistance measurement (TX-300B model).
- 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.

TX-300A/B Main Parameters

Parameter Item	Resistivity	Conductivity	Resistance
Measuring range	0.01 $\mu\Omega\cdot m$ ~2.5 $\mu\Omega\cdot m$	0.4MS/m~100MS/m 0.69%IACS~172%IACS	0.1 $\mu\Omega$ ~150 Ω
Resolution	10 ⁻⁴ ~10 ⁻⁶ $\mu\Omega\cdot m$	0.01~0.001%IACS	0.1 $\mu\Omega$ (I=1A)
Precision	$\pm 0.25\%$	$\pm 0.25\%$	100 $\mu\Omega$ ~150 Ω : $\pm 0.15\%$
Temperature measurement	-10 $^{\circ}C$ ~+55 $^{\circ}C$ Precision $\pm 0.2^{\circ}C$ (0 $^{\circ}C$ ~+40 $^{\circ}C$)		
Internal constant current of the instrument	16 μA level~1A level (automatic selection according to the measuring requirement)		
<u>Wire/cable</u> measuring fixture	① Equipped with 300mm portable measuring fixture, for wire diameter: $\varnothing 0.1mm$ ~ $\varnothing 10mm$ <input type="checkbox"/> Can select 1000mm standard measuring fixture or other non-standard fixture with different size (only for B model) ③ Equipped with a special wire for measuring coiled wire/cable (only for B model)		
Automatic	The measured value will be automatically compensated to the value at 20 $^{\circ}C$.		



Xiamen Tianyan Instruments Co., Ltd

temperature compensation	
Wire/cable measuring items	① Resistivity ρ_v , conductivity σ , resistance R, resistance of unit length R_l , mass resistivity ρ_m of solid conductors ② Wire/cable direct-current resistance, resistance of 1000m length (only for B model)
Printout data	Date, time, temperature correction coefficient α , wire specifications, and all measured values of conductor and wire/cable
Normal working environment	Temperature: 0°C ~ +40°C; relative humidity: 0~80%
Display	Large LCD screen with backlight, can display multiple measuring parameters at the same time.
Power supply	7Ah/7.4V chargeable lithium battery; battery power supply only, average working hour over 15 hours
Internal memory	Can save 1000 groups of measured data.
PC communication mode	RS232 serial port
Weight	Host: 2.2kg Portable measuring fixture: 1kg
Host size	285(W)*158(H)*120(D)
Host shell	Shock-resistance engineering plastic
Packaging and protection	Highly shock-resistance and portable aluminium alloy suitcase, containing the host, measuring fixture, charger, communication cable, calibration resistor, operation manual and CD, mini-printer, four-terminal resistor measuring clamp and temperature sensor.