## WINRES-20 20A WINDING RESISTANCE TESTER WITH BUILT-IN PRINTER







## WINRES-20 20A Winding Resistance Tester with Built-in Printer

WINRES-20 is designed using advanced engineering technology to measure the winding resistance of transformers.

WINRES-20 can measure current, voltage, power transformer windings and shunt resistors.

Applying up to 20A Direct Current allows WINRES-20 to measure the resistance of the transformers fast and accurate.

The smart design of the WINRES-20 makes easier to determine the end of measurement automatically according to users' decision.

WINRES-20 can measure two resistance values simultaneously with its two voltage measurement channels. Users can prefer to test two primary or two secondary or one primary and one secondary winding according to the configuration of transformers.

Beginning from 0.01  $\mu\Omega$  resistances, WINRES-20 can measure up to 100,000  $\Omega$  resistance. WINRES-20 discharges the measured circuit after each test.

For inductive load, WINRES-20 can demagnetise the load. The temperature measurement input enables one to connect an optional sensor to WINRES-20 and perform temperature correction automatically.

WINRES-20's intelligent software allows controlling the current flow if there is a failure in the current circuit. With this feature, WINRES-20 procures added safety to users.

A 7-inch TFT touch display allows WINRES-20 to show all measurement results on a single screen. WINRES-20 can be controlled by USB and optional Bluetooth interface and users can record/store measurement results.

In case setting up Laptop or PC for the field test is difficult; users can record data to the device's internal memory (up to 100 Test Records) or to an external USB flash memory.

With the HighTest Data Management Platform (DMP Software), users can control WINRES-20, analyse and manage measurement results using a PC.

Operators can easily print the measurement results with the 2.28-inch built-in Printer of WINRES-20.

WINRES-20 has an optional battery power feature which allows users to make tests even when there is no electricity.

Multi-language capability and user-friendly operation menu make it easy to control WINRES-20, even by less trained staffs.

Three-Phase Adaptor TPA-03 (optional accessory) allows connecting all primary and secondary sides concurrently, whereby users can select either to test the resistance of all phases or selective phases. With the TPA-03 option, WINRES-20 can control tap changer (raise and lower) with its tap changer outputs.

WINRES-20 is a light, compact and rugged device with the protection class IP67 (case closed).



## Features

- 2-channel resistance measurement
- I Measurements from 0.01  $\mu\Omega$  to 100,000  $\Omega$
- 0.001 A to 20 A DC adjustable current output
- I High accuracy (0.1%)
- I Demagnetisation feature
- On-load Tap Changer Test
- I User-friendly operation menu
- Built-in printer (2.28-inch)
- Data Management Platform (DMP Software) allows to control WINRES-20, analyse and manage results on PC

- Optional Battery
- Internal memory, USB Flash Drive
- PC control via USB cable
- I Optional Bluetooth control and communication
- 7-inch large colour touch display
- Temperature correction (1 input, sensor optional)
- Multi-language
- Optional accessory TPA-03 (Three-Phase Adapter) makes WINRES-20 outputs concurrently connectable to primary and secondary sides of three-phase power transformers.

## **Technical Specifications**

Measurement Parameters	2-channel resistance		
Test Voltage	50 V		
Current output	From 0.001 A to 20 A DC (User-selectable)		
Resistance Measurement	From 0.01 $\mu\Omega$ to 100,000 $\Omega$		
Accuracy	Current Value	Resistance Value	Accuracy
	1 mA - 10 mA	Up to 100 kΩ	0.1 % rdg 0.1 % of Fs
	10 mA - 100 mA	Up to 5 kΩ	0.1 % rdg 0.1 % of Fs
	100 mA - 1 A	Up to 500 Ω	0.1 % rdg 0.1 % of Fs
	1 A	Up to 50 Ω	0.1 % rdg 0.1 % of Fs
	20 A	Up to 2.5 Ω	0.1 % rdg 0.1 % of Fs
Demagnetisation	Yes		
Power Supply	100 - 240 V, 47/63 Hz		
Battery	14.4 V 6.9 Ah battery (Optional)		
Memory	Up to 100 records (include up to 25 tap results)		
Printer	2.28-inch built-in Printer		
Communication	USB 2.0/1.1 Standard-A, USB 2.0/1.1 Standard-B, Bluetooth (Factory install option)		
PC Software	DMP Software		
Display	7-inch Colour Touch Display		
Dimensions	16.7" x 13.4" x 6.8" (424 mm x 340 mm x 173 mm )		
Weight	6.5 kg		
Working Temperature	-10 °C to +60 °C		
<b>Protection Class</b>	IP67 (case closed)		
Set of Package	WINRES-20, Power Cable, Ground Cable , 1x 15 feet Current Cable Set, 2 x 15 feet Voltage Cable Set, USB Cable, Tap Changer Cable Set, Jumper Cable, Printer Paper (x2), USB flash drive, Instruction Manual (Soft Copy), DMP Software, Cable Bag		
Options	Hard carrying case, Battery, Bluetooth (factory install), Three-Phase Adapter TPA-03, Temperature Sensor, 30 feet Long Cable Set		

Specifications are valid under 25 °C temperature. \*Contents subject to change without notice.

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HighTest Technology Ltd. is a leading manufacturing company based in the UK which produces highly precise test equipment. We mainly focus on the development, manufacture, and marketing of Transformer test systems and Solar test devices. We have several years of experience in the field of developing and producing high-end test equipment. Customer satisfaction is our prime motto. We supply our test equipment worldwide to Transformer manufacturers, Electrical utilities, PV module/ Solar panel manufacturers, general contractors and service companies. Our test equipment is designed and produced according to the most widely adopted international standards. As we value our customers the most, our well-experienced team always provide excellent after-sales support and technical assistance.



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