



**HIGHTEST**  
TECHNOLOGY

# WINRES-20 SERIES

20A Winding Resistance Tester with Built-in Printer







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

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

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

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

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

WINRES-20 Series 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 0.1  $\mu\Omega$  resistances, WINRES-20 Series can measure up to 100,000  $\Omega$  resistance. WINRES-20 Series discharges the measured circuit after each test.

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

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

A 7-inch TFT touch display allows WINRES-20 Series to show all measurement results on a single screen. WINRES-20 Series 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 Series, 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 Series.

WINRES-20 Series 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 Series, 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 Series can control tap changer (raise and lower) with its tap changer outputs.

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



## Features

- 2-channel resistance measurement
- Measurements from 0.1  $\mu\Omega$  to 100,000  $\Omega$
- 0.001 A to 20 A DC adjustable current output
- High accuracy (0.1%)
- Test Voltage 50 V
- Demagnetisation feature
- On-load Tap Changer Test
- 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
- Optional Bluetooth control and communication
- 7-inch large colour touch display
- Temperature correction (1 input, sensor optional)
- User-friendly operation menu
- 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

<b>Measurement Parameters</b>	2-channel resistance			
<b>Test Voltage</b>	50 V			
<b>Current output</b>	From 0.001 A to 20 A DC (User-selectable)			
<b>Resistance Measurement</b>	From 0.1 $\mu\Omega$ to 100,000 $\Omega$			
<b>Accuracy</b>	Current Value	Resistance Value	Accuracy	Resolution
	1 mA - 10 mA	Up to 100 k $\Omega$	0.1 % rdg 0.1 % of Fs	100 $\mu\Omega$
	10 mA - 100 mA	Up to 5 k $\Omega$	0.1 % rdg 0.1 % of Fs	10 $\mu\Omega$
	100 mA - 1 A	Up to 500 $\Omega$	0.1 % rdg 0.1 % of Fs	10 $\mu\Omega$
	1 A	Up to 50 $\Omega$	0.1 % rdg 0.1 % of Fs	1 $\mu\Omega$
	20 A	Up to 2.5 $\Omega$	0.1 % rdg 0.1 % of Fs	0.1 $\mu\Omega$
<b>Demagnetisation</b>	Yes			
<b>Power Supply</b>	100 - 240 V, 47/63 Hz			
<b>Battery</b>	14.4 V 6.9 Ah battery (Optional) (Models: WINRES-20B, WINRES-20B BLUE)			
<b>Memory</b>	Up to 100 records (include up to 25 tap results)			
<b>Printer</b>	2.28-inch built-in Printer			
<b>Communication</b>	USB 2.0/1.1 Standard-A, USB 2.0/1.1 Standard-B, Bluetooth (Factory install option)			
<b>PC Software</b>	DMP Software			
<b>Display</b>	7-inch Colour Touch Display			
<b>Dimensions</b>	16.7" x 13.4" x 6.8" (424 mm x 340 mm x 173 mm )			
<b>Weight</b>	7 kg (models with battery)			
<b>Working Temperature</b>	-10 °C to +60 °C			
<b>Protection Class</b>	IP67 (case closed)			
<b>Set of Package</b>	WINRES-20, Power Cable, Ground Cable , 1 x 5 m (16.4 ft.) Current Cable Set, 2 x 5 m (16.4 ft.) 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			
<b>Options</b>	Hard carrying case, Battery, Bluetooth (factory install), Three-Phase Adapter TPA-03, Temperature Sensor, 10 m (33 ft.) Long Cable Set			
<b>Ordering Information</b>	WINRES-20, 20A Winding Resistance Tester with Built-in Printer			
	WINRES-20 BLUE, 20A Winding Resistance Tester with Built-in Bluetooth & Printer			
	WINRES-20B, 20A Winding Resistance Tester with Built-in Battery & Printer			
	WINRES-20B BLUE, 20A Winding Resistance Tester with Built-in Battery, Bluetooth & Printer			

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



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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