TRAN-203 SERIES 20A, 250V 3-PHASE TRANSFORMER ANALYSER

The TRAN-203 series of instruments are designed to measure the turns ratio and winding resistance of three-phase and single-phase transformers. Via its user friendly interface the TRAN instrument/s provide a fast and accurate assessment of key transformer parameters.

TURNS RATIO MEASUREMENT

The TRAN-203 employs elements of performance tests specified in the ANSI/IEEE C57.12.90 standard. With market leading accuracy the TRAN-203 has a very wide ratio measurement capability with a precision of 0.08 %. Other features include the measurement of core excitation current, phase angle, polarity, ratio error and magnetic balance. Even though TRAN-203 has a three-phase cable configuration, users can also perform single-phase transformer tests. TRAN-203 can detect vector groups automatically. The instrument has a wide operating range for use on equipment such as high excitation current transformers and high power potential transformers in substations. The instrument can generate 1V, 4V, 10V, 40V, 100V, 250V AC test voltages.

WINDING RESISTANCE MEASUREMENT

Applying up to 20 Amps of direct current allows the TRAN -203 series to measure the resistance of three phase transformer's primary and secondary windings automatically. TRAN-203 instrument/s are designed to measure the resistance of the primary and secondary transformer windings without the need to disconnect and reconnect the test cables.

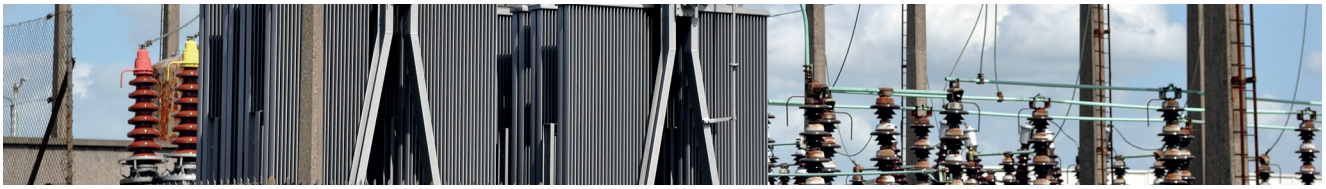
Starting at 0.1 µΩ, the TRAN-203 series can measure up to 100,000 Ω of resistance. The instrument can control OLTC. The TRAN-203 series can demagnetise the transformer to mitigate the build up of remanence or residual magnetism due to the testing. Device discharges through its voltage channels in case High Voltage is present in the transformer under test.

The instrument also has a temperature measurement input which when connected to an optional temp sensor allows the TRAN-203 series to perform temperature correction or adjustments to its measurements. In the case of a failure in the current circuit the TRAN instrument/s intelligent software controls the flow of current to mitigate damage and provide added safety for users.

Heat run test/Temperature Rise Test

Heat run test or temperature rise test reproduces conditions of continuous rated load and the temperature rise occurring during the load. TRAN-203 is capable of measuring the winding resistance of transformers and the full load resistance Ro during heat run test by applying up to 20A DC.

An internal battery option is also offered for operators who feel that they may be in situations where a mains supply source isn't always available . Multi-language capability and a user-friendly operating menu make it easy to control.



DEVICE HIGHLIGHTS

Turns Ratio & Winding Resistance Tests

TRAN has a 3-phase cable configuration cable of testing turns ratio and winding resistance of both three phase and single phase transformers

Optional Rechargeable Li-Ion Smart Battery

TRAN comes with a 14.4V Li-Ion smart battery option which enables you to make tests while on field. TRAN works on both main power and consuming battery power.

Heat run test/ Temperature Rise Test

TRAN-203 is capable of measuring the full load resistance 'Ro' during heat run test by applying up to 20A DC.

2.28-inch Built-in Thermal printer

TRAN's built-in thermal printer let you print the results immediately during field test.

FEATURES

- Turns ratio measurement (Single-phase & Three-phase)
- Winding resistance measurement (Single-phase & Three-phase)
- Heat run test/Temperature rise test
- Magnetic Balance Test
- 7-inch TFT Colour touch display
- Built in 2.28-inch Printer
- Battery & Bluetooth options
- PC Software

TECHNICAL SPECIFICATIONS

Measurement Parameters	3-Phase Turns Ratio Measurement, Excitation Current, Phase Angle, Polarity, Ratio Error (%), Vector group detection, Magnetic Balance; 3-Phase Winding Resistance Measurement
TURNS RATIO MEASUREMENT FEATURES	
Ratio Measurement Modes	CT Mode, PT Mode (Single-Phase and Three-Phase)
Measurement Method	ANSI/IEEE C57.12
Test Voltages	CT Mode: 1 V and 4 V ; PT Mode: 1, 4, 10, 40, 100 & 250 V
Ratio Range	0.8 – 50,000
Phase An gle Measurement	0-360 Degree, ±0.2 degree
Excitation Current	Up to 2 A
Excitation Current Accuracy	±0.1 mA
WINDING RESISTANCE MEASUREMENT FEATURES	
Test Voltage	50 V
Current output	From 0.001 A to 20 A DC (User-selectable)
Resistance Measurement	From 0.1 µΩ to 100,000 Ω
Accuracy	0.1%
Resolution	5 digits
Demagnetisation	Yes
GENERAL FEATURES	
Power Supply	100-240 V, 47/63 Hz,
Battery	14.4 V 6.9 Ah battery (Models: TRAN-B, TRAN-B BLUE)
Internal Memory	Yes
Printer	2.28-inch Built-in Printer
Communication	USB 2.0/1.1 Standard-A, USB 2.0/1.1 Standard-B, Bluetooth(Models: TRAN- BLUE & TRAN- B BLUE)
PC Software	Data Management Platform Software
Display	7-inch colour touch display
Dimensions	(16.9 × 12.9 × 9.3)" (429 x 328 x 236) mm
Weight	9.5 kg
Temperature	Working: -10 °C to +60 °C; Storage: -30 °C to +70 °C
Humidity	95% RH Non-condensing
Protection Class	IP67 (case closed)
Included in the package	Power Cable, Ground Cable, 2x 5m H&X Measurement Cable Set, 2x 10m H&X Extension Cable Set, 5m Tap Changer Cable Set, USB Cable, Jumper Cable, Printer Paper (x2), USB flash drive, Instruction Manual (Soft Copy), DMP Software, Cable Bag

*Specifications are valid at/under 25 °C temperature. *Content subject to change without notice.*

ORDERING INFORMATION

TRAN-203	20A, 250V 3Ø Transformer Analyser with Built-in Printer
TRAN-203 BLUE	20A, 250V 3Ø Transformer Analyser with Built-in Printer & Bluetooth
TRAN-203B	20A , 250V 3Ø Transformer Analyser with Built-in Printer & Battery
TRAN-203B BLUE	20A, 250V 3Ø Transformer Analyser with Built-in Printer, Battery & Bluetooth