

3-PHASE

HIGHEST ACCURACY & LOWEST COST



Transformers Testing

3-PHASE

LTC Contact

Any type of transformer

Turns-ratios from 0,8 to 15000

RS232C and two USB ports


Self-adjusts before each measurement

Calculate of error percentage

Built-in thermal-printer

amperis

www.amperis.com

 AMPERIS PRODUCTS S.L
Agricultura,34
27003, Lugo, Spain

 Contact

+T [+34] 982 20 99 20 | F [+34] 982 20 99 11
info@amperis.com | www.amperis.com

The 3-PHASE is a true three-phase transformer turns-ratio tester designed to conform to the IEEE C57.12.90 measurement standard. The 3-PHASE generates and outputs a three-phase excitation test voltage to the three transformer primary windings. The induced three-phase secondary voltages are sensed, and the transformer turns-ratio is calculated. The 3-PHASE can measure turns-ratios from 0.8 to 15,000. The three phase turns-ratios, excitation current, and phase angle readings are displayed on the unit's LCD screen. Since a three-phase voltage is used to excite the transformer windings, the 3-PHASE can detect and measure turns-ratios of any transformer type, including phase-shifting transformers.

The 3-PHASE can be used as a stand-alone unit or can be computer-controlled. It can be operated locally using its alpha-numeric keypad and rotary switch. Information is displayed on a back-lit LCD screen (128 x 64 pixels) that is viewable in both bright sunlight and low-light levels. Test reports can be printed in the field on the unit's built-in 4.5-inch wide thermal printer. The 3-PHASE can store up to 112 test records and 128 test plans in Flash EEPROM. Test records or test plans can be stored or transferred to and from a PC via the available interfaces (RS-232C port, USB port, USB Flash drive port).

Transformer Test Voltages

The 3-PHASE generates three-phase transformer test voltages from a single-phase AC or DC power source. Three test voltages (8 Vac, 40 Vac, 100 Vac) allow the 3-PHASE to test CT's and PT's, as well as power transformers.

Auto-Detect Transformer Configuration

The 3-PHASE can automatically detect 130 different transformer types defined by ANSI, CEI/ IEC, and Australian standards, as well as phase shifting transformers.

Internal Test Record Storage

Up to 112 test records can be stored in the 3-PHASE's Flash EEPROM. Each test record may contain up to 99 turns-ratio, excitation current, phase angle, and nameplate voltage readings. Test records can be recalled locally or transferred to a PC via the available interfaces (RS-232C port, USB port, USB Flash drive port).

Built-in Thermal Printer

The 3-PHASE features a convenient built-in 4.5-inch wide thermal printer that can be used to print test results.

Transformer Test Plans

The 3-PHASE can store up to 128 transformer test-plans in its Flash EEPROM. A test-plan is comprised of the transformer

nameplate voltages for each tap setting. The calculated turns-ratio based on the nameplate voltages is compared with the measured turns-ratio to derive the percentage error and Pass/Fail results. By recalling a test plan, a transformer can be quickly tested and turns-ratio Pass/Fail reports can be reviewed. Test plans can be created with the PC software and can be transferred to the 3-PHASE via the available interfaces (RS-232C port, USB port, USB Flash drive port).

User Interface

The 3-PHASE features a back-lit LCD screen (128x64 pixels) that is viewable in both bright sunlight and low-light levels. The test results screen displays the transformer turns-ratio, excitation current, phase angle, and percentage error. The unit is controlled via a rugged, 16-key, membrane keypad and a digital rotary switch.

USB Flash Drive Interface

A built-in USB Flash drive interface provides a convenient method for transferring test plans and test records to or from a USB Flash drive. The user can store up to 999 transformer test plans and test records on a USB Flash drive, and the supplied PC software can be used to view the test records.

Computer Interface

The 3-PHASE can be computer-controlled via the RS-232C or

USB port using the Windows®- based Transformer Turns-Ratio Analyzer Series 2 (TTRA S2) software provided with each 3-PHASE. The software can be used to run a test and to store test results on a PC. Test results can also be exported to Excel, PDF, and XML formats for further analysis.

Input Power Sources

The 3-PHASE can be powered from a single phase 100-240 Vac 50/60 Hz power source. A built-in safety ground detection circuit can detect and display any ground fault problems with the AC input source.

Transformer Load Tap Changer Control

Voltage regulator or LTC tap positions can be changed remotely using the unit's built-in transformer load tap changer. This feature eliminates the need to manually raise or lower tap positions from the transformer control panel.

3-PHASE's Connections

