



No need to rewire between test

Provides Closed-Link meter testing

Summing type reference standard

Tests Single Phase and polyphase meters

Performs Series and Element tests

Adjustable test current: 0 to 30 amps

Tests 1.0 and 0.5 power factor

Plug removable super-flex test cables

Compatible with most field test jacks

Operates from all service voltages: 120 to 480 volts

ABS case with retractable pull handle & wheels

Test Cable storage compartment in removable lid

Light weight - 40 lbs with cables & accessories

Optional test station

OVERVIEW

The 403 UTEC Phantom Load is designed for the fast and easy closed-link testing of all Single Phase and Polyphase meters. This robust test kit combines the reliability of phantom loading with the advanced capabilities of today's solid-state reference standards to provide a light weight universal test kit. The 403 is designed for use with the Radian Research RM-10 Standard series (RD Series Optional).

This test kit is quite versatile yet simple to operate. All test functions, including series and element tests, are controlled from front panel switches without the need for re-wiring. FL and LL test currents are logically placed on the current selection switch and the output current can be linearly adjusted from 0 up to full range. Percent of output current is displayed on a large panel

meter for easy reading. Both unity (1.0) and 50% (0.5) lagging power factor can be tested.

With a long service record, this load has been field proven for reliability and ruggedness. The 403 Phantom Load is packaged in a heavy duty ABS case with a retractable pull handle & wheels for easy transport. Loads can be purchased with or without reference standards.

With the addition of the RM-110 Automated Comparator, the 403 turns into a semi-automatic test system with the ability to automatically calculate, display, and store test results for solid state and electromechanical meters. For high volume testing, the addition of a 206 Universal Test Station provides for fast and easy connections.

Technical Specifications

Test Method

Closed-link, Phantom Loading.

Test Voltage

Switch selectable 120, 208, 240, 277 and 480 volts, 60 Hz.

Test Current

Switch selectable with FL and LL values placed on adjacent switch positions. Current value linearly adjustable from 0 to full scale from the front panel. Front panel meter displays relative output current.

Full load currents - 30, 15, 10, 5, 2.5 Amperes.
Light load currents - 3, 1.5, 1, 0.5, 0.25 Amperes.

Power Factor

Switch selectable from 1.0 and 0.5 lag (Current lagging voltage).

Element Selection

Switch selectable from +A, -A, +B, -B, +C, -C, +A + B, +A - B, -A + B, -A - B, +A + C, +A - C, -A + C, -A - C, +B + C, +B - C, -B + C, -B - C, +A + B + C, +A - B + C, +A - B - C, -A + B + C, -A - B + C, -A + B - C, and -A - B - C.

Reference Standard

Radian Research RM series (RD Series Optional).

Test Cables

Radian manufactures and offers a variety of test cables that are terminated using:

- Insulators & Copper Alligator Clips
- Ekstrom or Cam-Loc Connectors
- E-Z Hook Clips
- States or Multi-Amp Connectors
- R&D Specialties Connectors
- AVO UJT Connectors
- Custom cable terminations are also available, ask your salesperson about your specific application.

All test cables are manufactured from super flexible silicone rubber insulated wire that remains flexible over a temperature range of -67°C to +150°C and are loomed with a tight weave loom for extra protection and convenience. All cables are approximately 7.5 feet long.

Case

ABS with removable lid. Case is provided with telescoping handle and recessed wheels. Rings are included for an optional shoulder strap for easy carrying. Key locking latches and a leather padded carry handle are supplied.



Size

18 1/2" L X 11 1/2" W X 12 3/4" H

Weight

403 without reference standard and test cable 30 pounds.
403 with RM-10 reference standard and test cable 40 pounds.

Warranty

Two year limited warranty on the Model 403 and test cable. Reference standard carries manufactures warranty. Extended Warranty available.

Accessories

RM-110 Comparator

The RM-110 Comparator is a state of the art replacement for a revolutions counter. It is powered from a standard 9 volt battery. It can receive pulses from one or more reference standards and calculates, displays, and saves the test results for FL, PF, and LL as well as element tests. The meter test can be controlled using reflective photohead, IR photohead, handswitch, or KYZ pulses. Meter test results can be saved against the meter or customer number for upload to PCA-Link software application.

In addition, testing up to three standards at one time is possible with the RM-110 when using a single reference. The averaging mode allows three standards to be used as a single reference. The summing mode allows three singlephase standards to simulate one polyphase standard. Along with the default pulse count comparison testing method, remote gating of the standard under test is also supported maintaining compatibility with the traditional gating test methods.

Request Bulletin RM-110 and PCA-Link for more information.

Optics and Hand Switches

Radian offers a large selection of sensors for all meter testing application. These sensors include IR, Reflective, Visible Light and KYZ and even the trusty hand switch. Several options are also available for mounting the sensors to the meter under test. Please request bulletin Sensors for more information.

Test Station

For shop or van use, the Model 206 Universal Test Station can be used to provide S and A base mounting of meters and for supplying all metering voltages from a single auxiliary voltage input of 120V.

251 Storage Bag

Cable storage bag with adjustable shoulder strap. 12" x 12" x 3.5".

Radian offers a wide variety of accessories for use with the Model 403. We are constantly adding new accessories as new applications develop. If you have a unique application, contact the Radian sales team to see if we can help.