

# 225 Amp Automated Three-Phase Test System Model 2300

- Winboard™ Software
- Smart Socket™
- Laser Optics
- OPTOCOM™
- Testboard Options
- Turbo Test™



## Introduction

To develop the next generation of meters, your R&D department needs a tool that allows them to characterize meters in virtually any configuration without compromising accuracy or efficiency. With over thirty years of meter industry expertise behind it, Watthour Engineering provides meter manufacturers with the hardware and software to get more accurate meters to market in a shorter amount of time.

The Model 2300 is the tool that unlocks tomorrow's metering technology. This powerhouse provides the robust features found on WECO's popular Model 2350 testboard coupled with enhanced current output from 0.001 to 225 Amps for both single and three-phase testing. Now you can test a meter under virtually any conceivable condition by programming any combination of custom voltage, current, phase angles and magnitudes.

Backed by the reliability of WECO's Smart Socket™ technology, laser accurate optics system, Turbo Test™ function, fully integrated Winboard™ meter testing software, WATT-Net™ data management software, and knowledgeable customer support team, the Model 2300 is the tool for true meter manufacturing innovation. No wonder the Model 2300 is used in the meter labs of leading meter manufacturers and utilities.

## Winboard™ Software

Unlock the power and flexibility of your WECO testboard with Winboard™ meter testing software. Winboard™ utilizes software "Wizards" to simplify even the most complicated tasks. A strikingly user-friendly interface makes it easy to select test sequences, elements, and service types. The powerful combination of file/graph, test time, and Hyper Sequence™ features gives you total control over all test parameters. Customizable security options and WECO's dedicated customer support team round out this robust software package.

## Smart Socket™

Smart Socket™ technology extends the life of your testboard by mechanically controlling the inserting and removing of meters. Silver and gold connections inside the socket ensure the best connection to the meter under test. A quiet, cutting-edge, solenoid motor means reliable, quiet operation with low insertion force.

## OPTOCOM™ Option

With this optional OPTOCOM™ optic-coupler interface you can test and program meters without changing heads. Just clamp the head on for testing and forget worrying about aligning optics or detecting creep holes. When the test is complete, you can program the meter without replacing heads. The OPTOCOM option takes the error and effort out of meter testing and programming.

## Laser Optics

WECO's advanced laser optics has revolutionized meter testing. This innovative system employs a high intensity light beam that safely delivers highly accurate test results even through meter covers coated in dirt and grime. Whether testing off the black mark or through the creep holes, trust the WECO laser optics system to give you the precision that you demand with the ease you deserve.

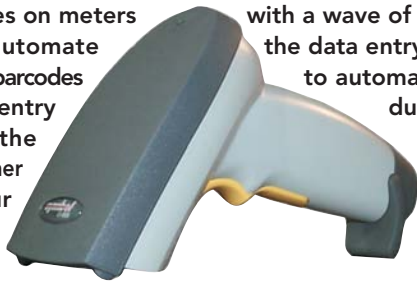


## Turbo Test™

WECO has worked hand-in-hand with the industry's leading meter manufacturers to bring you Turbo Test™ technology. Slash the amount of time it takes to test a supported meter on either WECO's 2300 or 2350 three-phase testboards to nearly one fifth of regular testing time. Save your shop valuable time and money with WECO's Turbo Test option.

## Barcode Option

Attach an optional barcode scanner and printer to your testboard to cut meter processing and data entry time. Scan AEP barcodes on meters with a wave of the barcode scanner to automate the data entry process, or print custom barcodes to automate customer information entry during testing. Either way, the barcode scanner will save your and money.

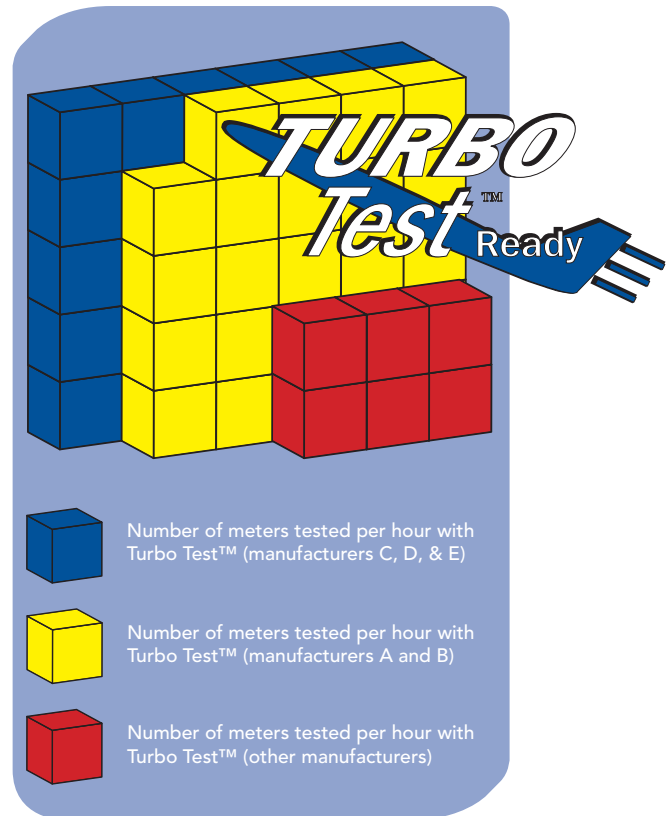


## Specifications

- **Input voltage:** 120 or 240VAC (3 wire), 50 or 60Hz single-phase
- **Input power:** 2000VA maximum
- **System accuracy:** For current ranges 0.2A–225A
  - » KWH  $\pm 0.04\%$  at 1.0 P.F. ( $\pm 0.01\%$  typical)
  - » KWH  $\pm 0.04\%$  at 0.5 P.F. ( $\pm 0.01\%$  typical)
  - » KW  $\pm 0.075\%$
  - » System accuracy is based upon the accuracy of the reference standard.
- **Voltage and current accuracy:** 0.50% true RMS
- **Phase angle accuracy:**  $\pm 0.5^\circ$
- **Test frequency:** 45–65Hz in 0.001Hz steps
- **Voltage harmonic distortion:** Less than 1.0% THD (Less than 0.5% typical)
- **Current harmonic distortion:** Less than 1.0% THD (Less than 0.3% typical)
- **Meter test forms:**
  - » 1S–17S, 19S, 21S, 24S, 26S, 29S, 35S, 36S, 45S, 46S, 56S, 66S
  - » New meter forms can be added using the testboard utility in the package.
- **Dimensions:** Approximately 21" W x 30" H x 21" D
- **Weight:** Approximately 225 pounds
- **Warranty:** One (1) year limited warranty (all parts and labor). Manufacturer warranty on computer.

## Testboard Options

- **OPTOCOM™:** Optics coupler allows pulse testing and meter programming through the optical port of many solid state meters without changing optics coupler.
- **Turbo Test™:** Accelerated testing for some solid state meters (requires OPTOCOM™ option)
- Barcode printer with software
- Barcode reader with software
- Multi-function testing capability
- Higher accuracy reference standard available
- Computer memory and storage upgrades
- Bottom connected single stator adapter
- Bottom connected multi stator adapter
- Custom adapter design available
- Automated standards compare adapter for RM or RD standards





## Testboard Features

- **Test voltage:**
  - » 60–600V; Independently programmable per phase in 0.01V steps.
  - » True three-phase or single-phase
- **Test current:**
  - » 0.001–225A
  - » Independently programmable per phase in 0.001A steps
- **Power factor test angle:**
  - » 0–359.9°
  - » Selectable in 0.1° increments per phase
- **Test revolutions:**
  - » Series full load selectable 1–65,534\*
  - » Elements full load 1–65,534
  - » Series light load selectable 1–65,534\*
  - » Elements light load 1–65,534
  - » Series power factor selectable 1–65,534\*
  - » Elements power factor 1–65,534
- **Test time:** Selectable from 1–9999 seconds (minimum of at least one energy pulse)
- **Demand (KW) testing:**
  - » Standard revolutions (1–99999 revolutions)
  - » Time run (up to 99 HRS, 59 MIN, 59 SEC)
- **Contact device testing:** Form "A" or "C" capability
- **Hyper Sequence™:** Four quadrant automated meter testing
- **File/graph testing**
- **Low current (starting watts) test begins at 0.001A**
- **Solid state voltage and current loading**
- **Voltage and current electronically ramped between tests**
- **Automatic slew between tests to minimize test time**
- **Smart Socket with minimal insertion force**
- **Front panel controls allow fast, easy test selection**
- **Automatic crossed stator wiring check during three-phase testing**
- **Modulated laser optics for through hole and reflect disk sensing**
- **Three optical pickups: Top, bottom, and middle/center**
- **Visual and audible (volume controlled) pulse indication for aid in aligning optical sensor**
- **LED bar graph indicates signal strength**
- **No sensitivity adjustment necessary for optics**
- **Easily removable reference standards for recertification**
- **PC Minimum System:** Dell™ standard business class Mini Tower PC • 17" flat screen monitor • Microsoft Windows® 7 Professional operating system, Vista available
- **Windows® compatible Winboard™ software**
- **WATT-Net™ data acquisition system**



\*Selectable Per Element



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