

# METER ENGINEERING BOARD



THE EASTERN SPECIALTY COMPANY

***For meter accuracy testing and certification.***



Perform qualification, disconnect, communication, and advanced functional tests with TESCO's new **Meter Engineering Board**. With basic metrology (0.1% accuracy) TESCO's new MEB can also be used as a demand board or a time run board, as part of meter certification, or to meet regulatory testing requirements. A new socket design provides automated operation to make loading easier. All new TESCO boards include our new electronically actuated sockets.

## **TESCO's Meter Engineering Board can help with:**

- Meter evaluating testing and certification
- Communications performance
- Power Line Communications testing
- Software and firmware verification
- Meter setting verification
- Meter functional testing
- Demand testing
- Time run testing
- Extended use testing
- Meter disconnect switch testing

## **SPECIFICATIONS & FEATURES**

***MEBs facilitates the following meter shop functions in high volume:***

- New AMI/AMR meter settings check-out
- Meter program updates
- Software revision checking for both the meter and the communications module
- Software revision checking for both the meter and the communications module
- Communications module troubleshooting
- Checking of problem meters for open/shorted elements

***MEBs give the user the ability to check meter response to:***

- Varying loads over long periods of time to simulate brown out and surge conditions
- Harmonic waveforms (can download custom harmonic waveforms through PC interface)

- Meter power on/off cycling
- Phasor distortion (MEB3)

***MEBs give engineers the ability to:***

- Run baseline meter accuracy tests
- Perform demand and time-run tests
- Run comparative accuracy tests under widely varying loading conditions

***Features:***

- Each MEB/MEB3 comes with a PC program that can be loaded onto a customer's computer connected to the MEB/MEB3's Ethernet port to replicate the functionality of the display and keyboard on multiple chassis
- Includes electronic socket controls, potential routing relays, user interface display and keypad, and service disconnect load side power indicating lamps

- Automatic routing of voltages to the correct stabs for the following meter forms: 1S-6S, 8S-17S, 25S, 26S, 29S, 32S, 35S, 36S, 45S, 56S, 66S, 76S, 103S, 106S, 109S, 112S, 116S, 125S, 135S, 136S, 145S, 166S
- Voltage Drive: 60-480V RMS, 680V PK; Voltage Accuracy:  $\pm 1.0\%$
- Current Drive: 0.001A to 50A RMS, 75A PK; Current Accuracy:  $\pm 1.0\%$
- Arbitrary Waveform Generator, 6kHz Bandwidth
- Automatic Generation of all ANSI C12.20-2016 waveforms
- Dropped cycle testing
- Fundamental Frequency: 45-65Hz

**Contact TESCO today for a quote or for more information at 215.785.2338.**

# MEB ADDITIONAL INFO

## MEB1

TESCO's MEB1 applies voltage to all appropriate stabs and isolated currents to all phases of electric meters so they can be energized in a traditional series-parallel configuration. This allows the meters to be functionally tested/verified by meter technicians, and using an internal reference standard meter engineers and technicians can perform more in-depth testing of meters.

- Includes two independent voltage and current waveform generators, and two internal reference standards per dual socket module
- User friendly 5.0" diagonal, 800x480 TFT color display and keypad for setup
- Voltage and Current amplitude adjustable at the keypad
- One voltage and three isolated current channels are all either in phase or 180 degrees out of phase with each other. This allows true series-parallel testing of all common meter forms
- Meter forms selectable at the keypad

### Measurement Accuracy:

- Voltage:  $\pm 0.05\%$
- Current:  $\pm 0.05\%$
- Active Power (Watts):  $\pm 0.1\%$
- Apparent Power (VA):  $\pm 0.1\% \ddagger$
- Reactive Power (VAR):  $\pm 0.1\% \ddagger$
- Active Energy (WHrs):  $\pm 0.1\%$
- Apparent Power (WAHrs):  $\pm 0.1\% \ddagger$
- Reactive Power (VARHrs):  $\pm 0.1\% \ddagger$

## MEB3

TESCO's MEB3 applies true three phase voltage and current to electric meters so they can be energized, enabling them to be checked out by meter technicians. An internal reference standard enables meter engineers to perform more in-depth testing of meters.

- Includes three independent pairs (voltage and current) of waveform generators and a three phase internal reference standard per single jacket module
- User friendly 7.0" diagonal, 800x480 TFT color display and keypad for setup
- Voltage and Current amplitude adjustable per phase at the keypad
- Standard services selectable at the keypad
- Phasor relationship between channels adjustable at the keypad
- Meter forms selectable at the keypad

### Measurement Accuracy:

- Voltage:  $\pm 0.05\%$
- Current:  $\pm 0.05\%$
- Active Power (Watts):  $\pm 0.1\%$
- Apparent Power (VA):  $\pm 0.1\% \ddagger$
- Reactive Power (VAR):  $\pm 0.1\% \ddagger$
- Active Energy (WHrs):  $\pm 0.1\%$
- Apparent Power (WAHrs):  $\pm 0.1\% \ddagger$
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## Calibration Adapter



TESCO's Calibration Adapter (Cat. 2450) is a socket adapter designed to bring phase A, B, and C current and potentials of a TESCO multi-position test board to an external reference standard for calibration of the test board.

Featuring a sturdy handle for easy insertion and removal, the Calibration Adapter also has safety terminals on the cover to protect current and potential wires

**Rated to 600V**

**Current Range: 0-66.7A**



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