

Request for Proposal

#: ELE/2606570 Three Phase Electric Meter Test Board

Tesco – The Eastern Specialty Company

925 Canal Street

Bristol, PA 19007

678-232-0017

Brian.Jehle@tescometering.com

Transmittal Letter

Tesco – The Eastern Specialty Company

925 Canal Street

Bristol, PA 19007

215-228-0500

Years in Business: 122

2. Deviations or Exceptions: None

3. TESCO proudly manufactures all its **custom utility products** at our ISO 9001 and ISO 17025 certified facility in Bristol, Pennsylvania. From this historic location, we serve electric utilities across North America with **tailored utility equipment** including meter test boards, field testing kits, burden sets, EVSE testers, and optical tools. Our **US-manufactured utility equipment** ensures short lead times, tight quality control, and precision-engineered performance.

From lab-grade testing setups to rugged field kits, our **American-made metering equipment** meets the demands of modern grid environments with unmatched durability and accuracy.

What sets TESCO apart is our hands-on collaboration with utility professionals. We work closely with engineers, meter shop managers, and field techs to design **custom utility products** that solve real-world challenges—from field testing to streamlined shop operations. Whether you need transformer-rated enclosures, meter calibration services, or AMI test solutions, TESCO delivers purpose-built tools that perform.

4. Tesco and our team have read and understood the procedures and criteria regarding the requirements, terms and conditions resulting in the contract.

Brian Jehle

Territory Manager

Date: April 27, 2026

Tab1: Qualifications and Experience

(5) The Tesco project team has over 100 plus years' combined experience in meter test equipment sales, design and engineering, field service and troubleshooting, software development and training utilities around the country and in over 15 foreign countries.

(6) Brian Jehle: Territory Manager, Vernon White: Regional Sales Manager, Harold Kennedy: Field Service Engineer, June Espinosa: Software Engineer, and Carlo-Val Gocela: Software Engineer, Joe Grasela: Field Service Manager

(7) Brian Jehle: sales and training: 9 years' industry experience

Vernon White: Sales and Training: 24 years industry experience

Harold Kennedy: machine set up, commissioning, training. 20 plus years

June Espinosa: 12 plus years writing code, software and development

Carlo-Van Gocela: 10 plus years TDM (Software) and Data Migration support

(8) Contractors: N/A

(9) Tesco has installed 7, MTB 3050 with Teco Energy in Tampa, Florida. Recently we have installed and trained personnel in the City of Bartow, Florida with the same machine. See attached reference form.

Tab 2: Technical Compliance and System Capability, Training, and Support

(10) The MTB 3050 provides full functional meter testing for AMI meters, AMR meter, and mechanical meters. The machine will allow for communication with your meter communication software to program, troubleshoot, and provide diagnostic work. In addition, the 3050 features disconnect switching capabilities, power cycling and a barcode scanner can be used to scan meter barcodes and standard AEP codes. (Please see attached specification sheet Section 1, subsection A, for more details.) The specifications meet and/or exceeds your technical and functional requirements.

(11) The MTB 3050 meets all functional capabilities and performance specifications for meter accuracy testing per ANSI C12.31; voltage accuracy .02%, current accuracy .02%, automated electric meter socket operation load side current disconnect and more; and supported meter forms; 1S-6S, 8S-17S, 25S, 26S, 29S, 32S, 35S, 36S, 45S, 46S, 56S, 66S, 76S, 103S, 106S, 109S, 112S, 116S, 125S, 135S, 136S, 145S, 166S. (See attached specification sheet for more details) The specifications meet and/or exceeds your technical and functional requirements.

(12) It is important to note for system reliability unlike other manufacturers' test boards, the Tesco 3050 can perform meter accuracy tests from the integrated panel as well as through a computer connected via ethernet by use of our TDM software. While competitors may say their board is operational via the test board panel, they all can't say a meter test can be performed from both the integrated panel and a computer. The Tesco 3050 has this so if your computer crashes, one can still test meters, and the internal software will save test data until it can be downloaded to a computer. Additionally, Tesco does not charge for software or future patches, upgrades, and firmware updates. Our ability to integrate, import and export test data to your software can be done with CSV files, DAT files, or See attached specification sheet for more

information. The specifications meet and/or exceeds your technical and functional requirements.

(13) Upon delivery, we will schedule a date and time with the appropriate Ocala Utility personnel to unpack, place, and set up the MTB 3050 for operation. We will provide a day of on-site training at no charge. This will encompass reviewing the owner's manual, powering the unit, showing the process to build test sequences, test meters for accuracy, utilize the Tesco Device Management software and Integration of test data to Ocala's billing database. (The integration process may take some additional time with Carlo and June along with your billing/database personnel to set up the appropriate csv files and mapping directions but there is no additional charge for this service.) Ongoing phone support during normal business hours is always available to Ocala Utility personnel. Key personnel with Ocala Utilities will be given phone numbers and email addresses of appropriate contacts listed above for future support and data integration.

(14) Expected set up and training should take no longer than 3-5 hours depending upon the intricacies of testing the City of Ocala requires. Tesco would require from the City of Ocala space to set up the machine, and the ability to connect the Tesco machine to a computer along with the download of Tesco's TDM software. We may also need a person from the City of Ocala's IT department to help with software set up based upon the cities firewalls and software policies. Additionally, we would eventually need someone with the city to work with us to provide customer billing data for our test data integration into the city's billing system.

Tab 3: Price Proposal

Proposal for

Ocala Electric Utility

Single Position Catalog #3050 True Three Phase Meter Accuracy and Functional Test Board

Proposal **#29504** - Please reference this Proposal Number on the Purchase Order

Prepared by

TESCO - The Eastern Specialty Co

April 27, 2026

- **Description**

TESCO - The Eastern Specialty Company is pleased to submit this proposal for the manufacture of a multi-form, single position True Three Phase Meter Test Board, used to power electric meters with voltage and run load current through the meter for accuracy testing and advanced functional testing of multiple forms.

The board will conform to the specifications listed in the document titled MTS-3050 Meter Test Board Revision 2/12/19 provided along with this proposal.

- **Budget and Schedule**

MTS-3050, Single Position, 50 Amp, 0.04% accuracy standard Meter Test Board: **\$51,185.50**

Pricing includes TESCO TDM Software, future unlimited downloads and upgrades, on-site training, phone support during business hours, and 1035 Optical Probe/Pickup Combo. The above price also includes freight charges FOB Destination Ocala, FL.

Optional Items not included in price above:

- Diamond Level Support for this board is **\$7,753.16**. (See Note Below Outlining Diamond Level Support.) **Diamond Level Support can be added within the first year of delivery/installation of the product.**
- Catalog #1031 KYZ Pulse Indicator- \$371.70 each
- Catalog #1031-C3 KYZ Pulse Indicator - \$371.70 each
- Catalog #1031-C6 KYZ Pulse Indicator - \$427.45 each

For domestic credit card orders greater than \$1,000 a 3.00% fee will be added to the invoice. For international credit card orders greater than \$1,000, a 5.00% fee will be added to the invoice. This fee does not exceed our cost of processing credit card transactions.

Terms of Payment: Net 30 days.

This pricing is valid for 90 days from date of proposal.

Lead Time is 2-4 weeks ARO

To better expedite your order and have products to you in a faster time frame, TESCO will make partial shipments against your order as items become available.

To ensure your purchase order is processed as accurately and quickly as possible, please be sure to make your purchase order out to:

TESCO- The Eastern Specialty Company

925 Canal St

Bristol, PA 19007

Please update this information in your ERP system if needed.

Please also be sure to include your full ship-to information and billing information.

Please send all purchase orders to salesorders@tescometering.com

Optional: TESCO Diamond Level Support:

As an option, TESCO is pleased to offer you our Diamond Level Support Package on this product for the period 3 years from the date of receipt of the equipment at your utility. Diamond Level Support will include the following:

- Extended warranty of 2 additional years (3 years total from date of equipment delivery).
- All required parts for any warranty repair.
- On-site labor and travel for all warranty related service calls.
- Shipping back and forth between TESCO and the customer, if required. TESCO and customers will determine the best method for shipping.
- Unlimited phone support during normal business hours, 8am to 6pm EDT.
- Preventative maintenance trip to keep the panels, controls and sockets in working condition. To keep your equipment in good working order this maintenance trip shall be determined and scheduled by TESCO.
- Opportunity to continue extended warranty beyond year three as long as there is no lapse in Diamond level support coverage.
- Diamond Level Support extended coverage does not include calibration

- **Standard Warranty:**

TESCO warrants that the units fabricated by TESCO shall be free from defects in material and workmanship at the time of delivery and for one year from the date of delivery (unless Diamond Level Support is selected). If any such item should prove to be defective in material or workmanship under normal intended usage and maintenance during the warranty period, after examination by personnel from TESCO and the Customer, then TESCO shall repair or replace, at its option, such defective item at its expense. This coverage includes parts and labor. Travel expenses for repairs will be invoiced at cost plus a 10% administrative fee. This warranty is limited to the value of the product itself and only to damage to the product itself – no consequential damages are covered under this warranty. Warranty does not include annual calibration.

- **Standard Warranty:**

TESCO warrants that the units fabricated by TESCO shall be free from defects in material and workmanship at the time of delivery and for one year from the date of delivery (unless Diamond Level Support is selected). If any such item should prove to be defective in material or workmanship under normal intended usage and maintenance during the warranty period, after examination by personnel from TESCO and the Customer, then TESCO shall repair or replace, at its option, such defective item at its expense. This coverage includes parts and labor. Travel expenses for repairs will be invoiced at cost plus a 10% administrative fee. This warranty is limited to the value of the product itself and only to damage to the product itself – no consequential damages are covered under this warranty. Warranty does not include annual calibration.



PRODUCT SPECIFICATION

MTS-3050 Three Phase Meter Test Board

1) General Functionality

The TESCO MTS-3050 is a state of the art meter test system offering unsurpassed functionality and ease of use. All of the features you will ever need to test today's and tomorrow's meters are standard on these systems.

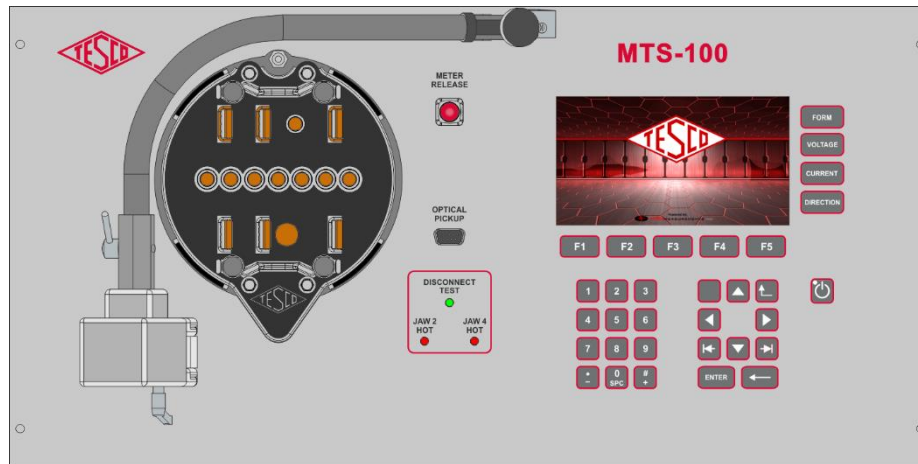
a) Capabilities

- i) User friendly 7.0" diagonal, 800x480, TFT color display and keypad for setup
- ii) Simple, electronically-controlled loading of meters
- iii) Voltage and current routed to the proper locations on the meter socket based on form selected
- iv) Voltage and Current amplitude adjustable at the keypad
- v) Standard services selectable at the keypad
- vi) Phasor relationship between channels (i.e. A to B phase angle) adjustable at the keypad
- vii) Power Factor (phase angle) adjustable at the keypad
- viii) Service disconnect testing through keypad selection
- ix) IR port, radio, and PLC communications testing can be completely checked out for all meters loaded into the board
- x) The MTS-3050 facilitates the following meter shop functions in high volume:
 - (1) New AMI/AMR meters settings check-out
 - (2) Meter program updates
 - (3) Software revision checking for both the meter and the communications module
 - (4) Communications module troubleshooting
 - (5) Checking of problem meters for open/shorted elements.
- xi) The MTS-3050 gives the user the ability to check meter response to:
 - (1) Varying loads over long periods of time to simulate brown out and surge conditions.
 - (2) Harmonic waveforms (can download custom harmonic waveforms through PC interface).
 - (3) Meter power on/off cycling
 - (4) Phasor distortion
- xii) The MTS-3050 gives engineers the ability to:
 - (1) Run standard meter accuracy tests
 - (2) Run complex meter accuracy tests under widely varying loading conditions
- xiii) Each MTS-3050 comes with Meter Manager Lite which provides complete control for complex test processes, archiving of test results and connectivity to Meter Manager, Tesco's proven Enterprise level data management package.



PRODUCT SPECIFICATION

2) MTS-100 Meter Test Module



- a) Digital Waveform Generators (per phase)
 - i) Synthesizer
 - (1) Fundamental frequency adjustable from 45 to 60 Hz
 - (2) Waveforms
 - (a) Sinusoidal (THD < 0.4%) (< 0.1% typical)
 - (b) Defined by harmonic amplitudes
 - (i) Harmonic indices (1 through 25)
 - (ii) Either amplitude and phase or Fourier coefficients (a, b)
 - (c) ANSI C12.20-2015 test waveforms
 - (d) Dropped cycle waveforms: 1:1, 2:2, 4:4 any combination m:n where m+n=8
 - (e) Arbitrary waveforms: defined by an array of 4096 points representing 8 cycles
 - ii) Voltage Drive
 - (1) Three Channel, one side of each at ground
 - (2) Dual range: (1) 30 to 250V(rms), 353V(peak), (2) 200 to 500V(rms), 707V(peak)
 - (3) Adjustment resolution: 0.02% of full scale (approx. 0.1V)
 - (4) Accuracy 0.2%
 - (5) Output power: 100VA at 240V or 480V
 - (6) No fuses, automatic recovery from overloads even shorts
 - iii) Current Drive
 - (1) Three Channel, fully isolated
 - (2) Single range 0.01 to 50A(rms), 70A(peak)
 - (3) Adjustment resolution: 0.02% of full scale (approx. 0.1V)
 - (4) Accuracy 0.2%
 - (5) Compliance voltage: 1.0V
 - (6) No fuses, automatic recovery from fault conditions



PRODUCT SPECIFICATION

- b) Integrated Reference Standard
 - i) Three voltage and three current channels
 - ii) Measurements per ANSI C12.31 Definitions (C12.31 is in development)
 - iii) Measurement Accuracy
 - (1) Voltage: $\pm 0.02\%$
 - (2) Current: $\pm 0.02\%$
 - (3) Active Power(Watts): $\pm 0.04\%$
 - (4) Apparent Power(VA): $\pm 0.04\% \ddagger$
 - (5) Reactive Power (VAR): $\pm 0.04\% \ddagger$
 - (6) Active Energy(WHrs): $\pm 0.04\%$
 - (7) Apparent Power(VAHrs): $\pm 0.04\% \ddagger$
 - (8) Reactive Power (VARHrs): $\pm 0.04\% \ddagger$
 - iv) Other Measurements
 - (1) Harmonics to 50th
 - (2) Power Factor
 - (3) Time domain and frequency domain measurements
 - (4) KYZ connections available externally or can be used as meter pulses
- c) Automated Meter Socket
 - i) Universal socket with automatic closure on insertion of device
 - ii) Four point detection of meter in place
 - iii) Detection of meter bypass in place
 - iv) Automatic routing of voltages to the correct stabs for the following meter forms
1S-6S, 8S-17S, 25S, 26S, 29S, 32S , 35S, 36S, 45S, 46S, 56S, 66S, 76S, 103S, 106S, 109S, 112S, 116S, 125S, 135S, 136S, 145S, 166S
 - v) Load side current disconnect
- d) Meter Disconnect Switch Testing
 - i) Disconnect test mode powered by high current auxiliary transformer
 - ii) Test disconnect under any load current
 - iii) Disconnect mode indicator LED
 - iv) Voltage present LEDS for stab 2 and stab 4
 - v) Software detection of voltage present on stab 2 and stab 4
 - vi) Ability to apply back voltage to stabs 2 and/or 4 for reconnect testing
- e) Power Line Communication Testing
 - i) Meters can be powered by a 240V autotransformer for disconnect and communications testing allowing powerline signals to easily be transmitted from the meter through the unit to the wall power circuit.

$\ddagger$ Traceable only for sinusoidal waveforms.



PRODUCT SPECIFICATION

3) Physical

- a) The MTS-3050 meter test system is built up from standard subsystems mounted in a custom table top enclosure.
 - i) MT-14 Table Top Enclosure
 - (1) Size: 25.54W x 25.62D x 18.6H.
 - (2) Weight: 145 lbs
 - ii) Electric power
 - (1) Each rack requires a 120V at 8A or less.
 - (a) Note: These units contain large switching power supplies with high inrush currents.
 - (b) A minimum of 12 inches should be allowed behind the unit for proper ventilation.
 - iii) External Connections
 - (1) Rear
 - (a) Power inlet (120V IEC connector)
 - (b) Ethernet connection to internal network segment
 - (2) Front
 - (a) Main power breaker
 - (b) Ethernet connection to internal network segment
 - (c) Duplex convenience outlet (2A max)



PRODUCT SPECIFICATION

APPENDIX A – Standard System Configuration





TESCO METERING

Reliable Results. Every Meter. Every Time.

Product Information Sheet



925 Canal Street, Bristol, PA 19007

• 215.228.0500

• tescometering.com

Custom Equipment

Catalog No.

MTB 3050

50 Amp Meter Test Board

TESCO's Three Phase Meter Test Board (MTB-3050) TESCO's MTB-3050 is a 50-amp three-phase meter test board designed to meet the exacting requirements of both laboratory testing environments and high-volume production workflows. It supports full functional testing of AMI/AMR meters, meter programming, and detailed diagnostics such as firmware/software checks and communications troubleshooting. With advanced waveform generation, robust metrology, and integrated automation, the MTB-3050 delivers high accuracy and repeatability for both standard and complex test scenarios

FEATURES:

- Three-phase accuracy test board with $\pm 0.04\%$ accuracy
- (Options available for $\pm 0.02\%$ and $\pm 0.01\%$)
- Current drive: Single range 0.01–50A RMS, 70A peak (standard calibration to 50A)
- Simulates brownout/surge conditions with long-duration load variation
- Harmonic waveform support (ANSI C12.20 and custom waveforms via PC interface)
- Meter power on/off cycling and phasor distortion testing

- Electronically actuated automated meter socket with bypass and meter-in-place detection
- Automatic voltage routing for 40+ meter forms (1S–166S)
- Meter disconnect switch testing with reconnect capability
- Digital waveform generators (per phase)
- Integrated reference standard with $\pm 0.02\%$ voltage/current and $\pm 0.04\%$ Whr accuracy
- PC software interface to configure test sequences, meter elements, and service types
- Export test results with option to interface with your system of record
- Supports IR, radio, and PLC communication testing
- JSON-based protocol available for software control
- Optional accessories: Optical Pickups (Cat. 1037 series), Electromechanical Arm



***Laboratory-Grade
Three-phase Meter
Testing with Advanced
Metrology***



TESCO METERING

Reliable Results. Every Meter. Every Time.

Product Information Sheet



925 Canal Street, Bristol, PA 19007

• 215.228.0500

• tescometering.com

Custom Equipment Catalog No.

MTB 3050

50 Amp Meter Test Board

PHYSICAL SPECIFICATIONS

- The MTB-3050 meter test system is built up from standard subsystems mounted in a custom table top enclosure.
- MT-14 Table Top Enclosure
- Size: 25.54" W x 25.62" D x 18.6" H
- Weight: 148 lbs.

ELECTRIC POWER

Each unit requires a 120V at 8A or less. Note: These units contain large switching power supplies with high inrush currents

- A minimum of 12 inches should be allowed behind the unit for proper ventilation

EXTERNAL CONNECTIONS

Rear:

- Power inlet (120V IEC connector)
- Ethernet connection to internal network segment

ABOUT TESCO

Since 1904, TESCO has been the trusted partner of electric utilities worldwide, delivering durable, precise, and innovative metering solutions designed for the real-world demands of the field and the laboratory. Our products are engineered and manufactured in the USA and backed by world-class technical expertise and support.

Reliable Results. Every Meter. Every Time.

DISCLAIMER

TESCO Metering reserves the right to modify product designs, specifications, features, and documentation at any time as part of our continuous improvement process. All information is provided "as is" and may change without prior notice. While TESCO® strives for accuracy, completeness, and technical reliability, customers should verify the latest product details before making purchasing or engineering decisions. For confirmation of current specifications or application suitability, please contact TESCO® directly.



Front:

- Main power breaker
- Ethernet connection to internal network segment
- Duplex convenience outlet (2A max)
-

ORDERING INFORMATION

Catalog No.: MTB 3050

Warranty: 1 Year (Contact your TESCO Sales Representative to inquire about our Diamond Level Support for extended warranty coverage).