



925 Canal Street, Bristol, PA 19007
• 215.228.0500
• tescometering.com

Reliable Results. Every Meter. Every Time.

Safety Equipment

Third Rail Voltage Detector

4E2-1

OPTIONAL ACCESSORY:

4E2-1ST Third Rail Voltage Detector Self Test Accessory

- **Size and Weight:** 3.4 x 1.7 and .5 lb
The Cat. No. 4E2-1ST acts as a “tester for the tester”, providing assurance that the 4E2-1 is working properly before the crew uses it in the field. Lightweight and portable, the 4E2-1ST fits into the 4E2-1 carry case.



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.

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PRODUCT INTRODUCTION

The Next-Generation TESCO Third Rail Voltage Detector is an updated version to the 50-year tradition of the Third Rail Voltage Tester. Incorporating extensive customer feedback from multiple U.S. passenger rail systems, this improved design delivers enhanced visibility, improved ingress protection, and true redundant safety circuitry.

The unit is designed for AC and DC third-rail systems across the globe. The Third Rail Voltage Detector is manufactured with UL approved components. Key improvements include a brighter LED visual indication system, an integrated audible alert for crew-wide awareness, and full protective housing over electronic components.

This next-generation voltage detector builds on TESCO's legacy of rugged, field-proven safety tools designed for real-world operating conditions.

AT-A-GLANCE SUMMARY

- **Voltage Range:** 1,500 V DC
- **Span Length:** 4 ft
- **Indicators:** High-brightness LEDs and Audible Alarm
- **Ingress Protection:** Fully enclosed electronics
- **Ground Options:** Stainless steel tip
- **VoltCheck:** Separate Accessory for Purchase
- **Category:** Safety Products – Third Rail Voltage Detector
- **Warranty:** 1 year



*The Safe Third Rail
Voltage Detector with
True Redundancy*



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KEY BENEFITS

Enhanced Safety and Crew Awareness

Dual-mode indication—LEDs plus audible alarm—provides immediate and unmistakable voltage-present feedback for both operator and surrounding crew.

Extended Operator Clearance

A four-foot reach increases the distance between personnel and energized third rail surfaces.

Ingress-Protected Design

All internal circuitry is enclosed to eliminate exposed lamp windows and reduce moisture or debris concerns.

Redundant Circuitry and Overvoltage Protection

Engineered with multiple safety paths to minimize failure points and support operational reliability.

PRODUCT FEATURES

High-Visibility LED Indicators

LED lamps replace previous neon bulbs and provide significantly improved visibility in bright sunlight and nighttime conditions.

Integrated Audible Alarm

An additional layer of voltage-present confirmation for nearby crew members.

Redundant Safety Circuitry

Minimizes single-point failures and ensures reliable indication.

Fully Enclosed Electronics

Protects internal components from weather exposure and ingress concerns.

4-Foot Testing Span

Enables increased distance between operator and energized rail.

Rugged TESCO Construction

Impact-resistant housing, stainless steel tips, and soldered internal connections ensure long-term durability.

SPECIFICATIONS

Mechanical and Environmental

- **Span Length:** 4 ft (48")
- **Housing:** Phenolic or reinforced composite
- **Grip:** Rubberized safety guard
- **Ingress Protection:** Fully enclosed electronics
- **Weight:** 12 ounces

Electrical & Power

- **Voltage Range:** 1,500 V DC
- **System Types:** AC and DC third-rail systems
- **Circuitry:** Redundant pathways
- **Overvoltage Protection:** Integrated
- **Indicators:** High-brightness enclosed LEDs and audible alarm

Safety & Compliance

- UL listed components.
- Redundant circuitry for additional safety and reliability

INCLUDED ACCESSORIES

- Carrying case



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APPLICATIONS & USE CASES

- Detecting energized third-rail systems
- Transit and rail system maintenance
- Passenger rail and commuter rail electrification
- Pre-work voltage verification
- De-energization confirmation prior to inspection
- Crew safety confirmation scenarios

ORDERING INFORMATION

- **Catalog Number:** 4E2-1
- **Included:** Detector and carrying case.
- **Warranty:** 1 Year (Contact your TESCO Sales Representative to inquire about our Diamond Level Support for extended warranty coverage).

Contact TESCO Sales for configuration support and quoting.

