

TESCO Introduces 4E2-1 Third Rail Voltage Detector, Enhancing Safety for High-Voltage Transit and Utility Applications

A rugged high-visibility voltage detection tool delivers visual and audible alerts to improve operator safety when working around high-voltage 3rd rail systems

BRISTOL, PA, UNITED STATES, January 29, 2026 /EINPresswire.com/ -- TESCO® Metering today announced the launch of the [4E2-1 Third Rail Voltage Detector](#), a specialized safety instrument engineered to detect electrical potential between third rail systems and ground in high-voltage transit and utility environments. Designed for reliability, durability, and clear operator feedback, the 4E2-1 provides visual and audible voltage indication to support safer field operations.

As transit authorities and utilities operate within increasingly complex and high-voltage environments, ensuring technician safety during inspection, maintenance, and testing activities has become a critical priority. Third rail systems present unique hazards that require specialized detection tools capable of delivering clear, immediate confirmation of voltage presence. The 4E2-1 addresses this need by combining redundant detection circuits, high-visibility LED indicators, and an audible alarm within a rugged, field-ready design.

Purpose-Built for High-Voltage Detection and Operator Safety

The 4E2-1 Third Rail Voltage Detector is engineered to safely detect electrical potential between third rail systems and ground in electrified transit applications. The device utilizes two independent circuits with redundant LED indicators to provide clear visual confirmation of



TESCO Metering Logo

voltage, while a built-in audible alarm delivers an additional layer of situational awareness for operators.

Designed for harsh field environments, the detector features a moisture- and oil-resistant phenolic handle and housing, sealed internal electronics, stainless steel prod tips, and an integrated rubber hand guard to promote safe handling and reliable performance.

Key Advantages for Transit and Utility Professionals

Enhanced safety through redundant detection: Dual circuits provide added confidence in voltage detection.

Visual and audible alerts: High-visibility LED indicators and an audible alarm ensure clear voltage confirmation in all lighting conditions.



The 4E2-1 is designed for use in electrified rail systems, transit maintenance operations, and high-voltage utility applications where accurate voltage detection is essential to personnel safety."

*Tom Lawton, President & CEO
of TESCO Metering*

High-voltage capability: Operates on AC or DC systems up to 1,500 volts.

Extended reach: Spans distances of up to four feet for safer testing proximity.

Rugged, field-ready construction: Phenolic housing, sealed electronics, and stainless steel tips ensure durability in demanding environments.

Proven transit application: Developed for and used by BART and other transit systems.



Caution is required when working around third rail systems

Supporting Safety in Critical Infrastructure Environments

The 4E2-1 is designed for use in electrified rail systems, transit maintenance operations, and high-voltage utility applications where accurate voltage detection is essential to personnel safety. Its combination of redundant detection, clear alerts, and rugged construction enables operators to verify voltage conditions quickly and confidently before performing work in hazardous environments.

“Working around high-voltage infrastructure leaves no margin for uncertainty,” said Tom Lawton, President & CEO of TESCO Metering. “The 4E2-1 was engineered to provide clear, reliable confirmation of voltage presence, helping transit and utility professionals make informed safety decisions before they begin work.”

Product Summary

4E2-1 Third Rail Voltage Detector

Detects electrical potential between third rail and ground

Operates on AC or DC systems up to 1,500 volts

Dual detection circuits with high-visibility LED indicators

Built-in audible alarm for enhanced situational awareness

Rugged phenolic housing, sealed electronics, and stainless steel prod tips

Designed for high-voltage transit and utility environments

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Transit Workers use the TESCO Third Rail Voltage Detector



TESCO Third Rail Voltage Detector 4E2-1

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