

## TEMPO PE2003-G

# TEMPO Communications PE2003-G Pulser Ground Fault Locator

Model: PE2003-G

Brand: TEMPO

## INTRODUCTION

The TEMPO Communications PE2003-G Pulser Ground Fault Locator is designed for accurately identifying breaks in buried wire and cable insulation. This professional-grade kit provides essential tools for efficient fault locating, saving time and resources by pinpointing issues that may require replacement rather than repair.





Figure 1: Complete PE2003-G Pulser Ground Fault Locator kit, including the transmitter, receiver, A-frame, ground stake, and cables.

## SETUP GUIDE

Before operating the PE2003-G, ensure all components are present and properly connected. The kit includes a rechargeable transmitter, receiver, A-frame, ground stake, 120V charger, and a 12V DC adapter.

- 1. Charge the Transmitter:** Connect the 120V charger or 12V DC adapter to the transmitter to ensure it is fully charged before use.
- 2. Assemble the A-Frame and Receiver:**

# “A” FRAME RECIEVER

Features a visual analog meter pointing to the source of the voltage.



Figure 2: Close-up view of the PE2003-G A-Frame Receiver, showing the meter and controls.

Securely attach the receiver unit to the top bar of the A-frame. Ensure it is firmly in place to prevent movement during operation.

Video 1: Demonstrates the setup process, including attaching the receiver to the A-frame and connecting lead wires.

3. **Connect Lead Wires to Receiver:** Attach the red and black lead wires to their respective ports on the receiver.
4. **Connect Black Lead to Ground Stake:** Drive the ground stake into the earth near the area to be tested. Connect the black lead wire from the transmitter to the ground stake.



Figure 3: Proper connection of lead wires to the transmitter unit.

5. **Connect Red Lead to Faulty Wire:** Connect the red lead wire from the transmitter to the wire or cable you suspect has a fault. Ensure a secure connection.

## OPERATING INSTRUCTIONS

The PE2003-G operates by sending a high-voltage signal through the faulty wire, which then leaks into the ground at the point of insulation damage. The A-frame receiver detects this leakage.

1. **Power On:** Turn on the transmitter unit.
2. **Position the A-Frame:** Place the A-frame over the suspected path of the buried cable. The spikes on the A-frame should penetrate the ground.
3. **Observe the Receiver Needle:** As you move the A-frame along the cable path, observe the needle on the receiver's analog meter.

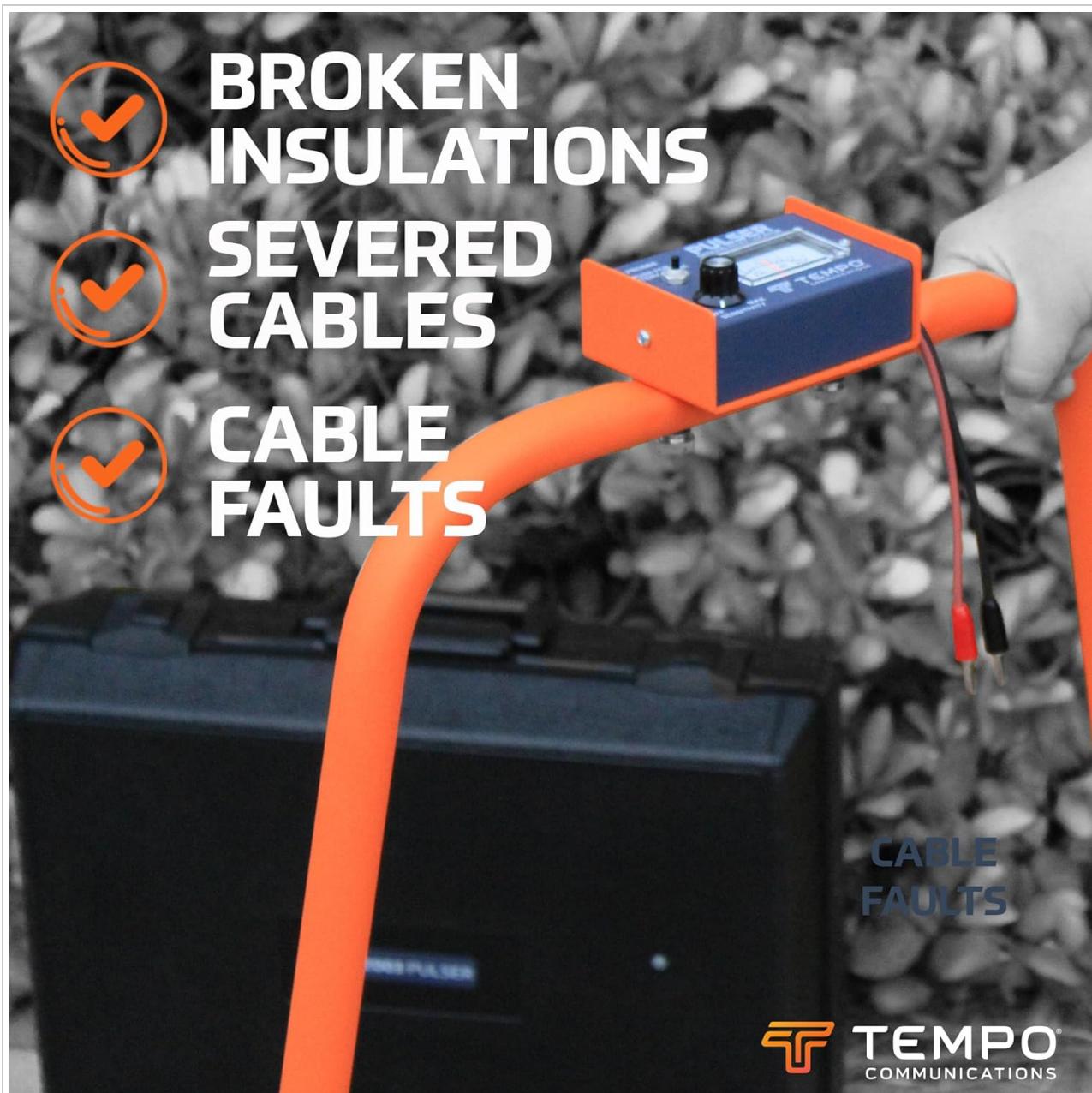


Figure 4: The PE2003-G is effective in locating broken insulations, severed cables, and various cable faults.

The needle will deflect towards the fault. The direction of the needle indicates the direction of the current flow towards the fault.

4. **Locate the Fault:** Continue moving the A-frame, following the direction indicated by the receiver needle. The fault is located when the needle reverses direction or shows a significant change in reading. This indicates you have passed over the fault.



Figure 5: A user demonstrating the use of the A-frame receiver to pinpoint an underground fault.

The PE2003-G is designed to detect multiple faults on a single wire, which can help determine if a repair or full replacement is more appropriate.

5. **Adjust Sensitivity:** Use the sensitivity knob on the receiver to adjust the responsiveness of the needle. Increase sensitivity for smaller faults or deeper cables, and decrease it to narrow down the fault location.

## MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your PE2003-G Pulser Ground Fault Locator.

- **Battery Care:** The transmitter uses a rechargeable 12V battery. Promptly recharge the transmitter after each use to maintain battery health. The receiver requires a 9V battery (not included); replace it when the battery check indicates low power.
- **Cleaning:** After each use, wipe down the A-frame, receiver, and transmitter with a clean, damp cloth. Ensure all components are dry before storing.
- **Storage:** Store the unit and its components in the provided molded carrying case in a dry, cool place, away from direct sunlight and extreme temperatures.
- **Inspection:** Regularly inspect all cables, connectors, and the A-frame for any signs of wear, damage, or corrosion. Replace damaged components immediately to ensure safe and accurate operation.

## TROUBLESHOOTING

If you encounter issues with your PE2003-G, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No needle deflection on receiver.	<ul style="list-style-type: none"><li>• Transmitter not powered on.</li><li>• Low transmitter battery.</li><li>• Poor connection to faulty wire or ground stake.</li><li>• Receiver sensitivity too low.</li><li>• No fault present or fault is too small.</li></ul>	<ul style="list-style-type: none"><li>• Ensure transmitter is switched ON.</li><li>• Recharge transmitter battery.</li><li>• Check all connections for tightness and proper contact.</li><li>• Increase receiver sensitivity.</li><li>• Verify the presence of a fault using other methods if possible.</li></ul>

Problem	Possible Cause	Solution
Inconsistent or erratic needle readings.	<ul style="list-style-type: none"> <li>• Interference from other buried utilities.</li> <li>• Ground conditions (e.g., very dry soil).</li> <li>• Receiver sensitivity too high.</li> </ul>	<ul style="list-style-type: none"> <li>• Move away from known utility lines.</li> <li>• Moisten the ground around the ground stake and cable path.</li> <li>• Decrease receiver sensitivity.</li> </ul>
Difficulty pinpointing exact fault location.	<ul style="list-style-type: none"> <li>• Receiver sensitivity too high.</li> <li>• Moving too quickly over the cable path.</li> </ul>	<ul style="list-style-type: none"> <li>• Gradually decrease sensitivity as you approach the fault.</li> <li>• Slow down your movement over the cable path to observe subtle changes in needle deflection.</li> </ul>

If the problem persists, contact TEMPO Communications customer support for further assistance.

## SPECIFICATIONS

- **Brand:** TEMPO
- **Model:** PE2003-G
- **Power Source:** Battery Powered (Rechargeable 12V for Transmitter, 9V for Receiver)
- **Style:** Pulse Ground Fault Locator
- **Color:** Black
- **Item Dimensions (L x W x H):** 9 x 36 x 25 inches
- **Minimum Operating Voltage:** 12 Volts (DC)
- **Specification Met:** ISO 9001
- **Upper Temperature Rating:** 50 Degrees Celsius
- **UPC:** 810025412623
- **Manufacturer:** Tempo Communications
- **Item Weight:** 17.76 pounds
- **Material:** Aluminum, Polyethylene
- **Measurement Accuracy:** 0.1mm
- **Included Components:** Underground Locator (Rechargeable Transmitter, Receiver, A-frame, Ground stake, 120V charger, 12V DC adapter)

## WARRANTY INFORMATION

TEMPO Communications products are manufactured to high standards and are warranted against defects in materials and workmanship. For specific warranty terms and conditions, please refer to the documentation included with your product or visit the official TEMPO Communications website. Keep your purchase receipt as proof of purchase for warranty claims.

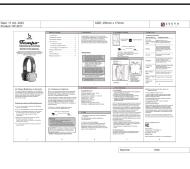
## CUSTOMER SUPPORT

For technical assistance, troubleshooting, or inquiries regarding your TEMPO Communications PE2003-G Pulser Ground Fault Locator, please contact our customer support team.

- **Online Resources:** Visit the official [TEMPO Communications Store on Amazon](#) for product information and additional resources.
- **User Manual (PDF):** A downloadable PDF version of the user manual is available at <https://manuals.plus/m/42d9c90d4422d5ef33f7f4e97aca50cb51c718ab45f1f1343f8d196d5742ae14>.

- **Contact Information:** Refer to the contact details provided in your product packaging or on the official TEMPO Communications website for direct support.

## Related Documents

	<p><a href="#">Roadmaps That Matter: A Guide to Strategic Planning and Execution</a></p> <p>Learn how to create actionable roadmaps that align strategy with execution. This guide covers common challenges, best practices, and tools for effective roadmapping, from balancing priorities to measuring success.</p>
	<p><a href="#">Tempo HP-3017 Wireless Headphones Instruction Manual</a></p> <p>Get detailed instructions for your Tempo HP-3017 Wireless Headphones. This manual covers pairing, charging, specifications, safety, and troubleshooting for your Bluetooth audio experience.</p>

## Documents - TEMPO – PE2003-G



### ELEVATE YOUR GAME WITH TEMPO!

Join us throughout the virtual SCTE/IHS Cable-Tec Expo® Virtual Experience for Tempo Trivia to win great prizes, including Tempo tools, t-shirts, hats and more! Tempo Trivia will take place October 13-14 at 1pm (EST) with a finals round on October 15 at 3pm (EST).

Tempo is dedicated on delivering rugged, reliable and job-specific tools for the Telecom technician. Talk with one of our specialists to learn how choosing Tempo can elevate your game!

Be sure to register at [expocablete.org](http://expocablete.org) to attend the Cable-Tec Expo Virtual Experience and play Tempo Trivia!

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**EMOTIONAL MARKER LOCATOR (EML-100)**  
A MARKER LOCATOR FOR UNCOVERING HIDDEN MARKERS

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**TRACKER II CABLE LOCATOR (PE2003-G)**  
A MARKER LOCATOR FOR UNCOVERING HIDDEN MARKERS

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**PULSER FAULT LOCATOR (PE2003-G)**  
FINDING DAMAGED FIBER OPTIC CABLES AT RECORD SPEED

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#### OPTICAL POWER METERS & STABILIZED LIGHT SOURCES

In July 2020, Tempo launched a new family of Optical Power Meters and Stabilized Light Sources. These new products are rugged and durable, designed to be used along with Tempo's line of optical fusion splices and optical fiber cleavers, these latest additions ensure maximum performance during the installation and maintenance of their optical networks.

Tempo's new Optical Power Meters are rugged and durable, precisely measuring optical powers down to the -65dBm. They are also extremely adaptable, working with single-mode and multimode fibers, and have a high resolution of 0.01dBm and maximum sensitivity. Rugged Locals for measuring high-powered optical signals; single-mode and multimode measurements; calibrated wavelengths of 850nm, 1300nm, 1490nm, 1550nm, 1625nm, and 1700nm; 10Hz and 20Hz tone. Models include: OPM4510 and OPM4520.

For the premise technician looking for a small yet durable and easy-to-use option, Tempo is proud to offer a new Micro Optical Power Meter. The Micro OPM offers a wide range of wavelengths, including 1300nm, 1490nm, 1550nm, and 1625nm. A Visual Fault Locator (VFL) delivers safe and effective fault locating. This tool offers single and multimode functionality and has calibrated wavelengths of 850nm, 1300nm, 1490nm, 1550nm, 1625nm, and 1700nm. Includes 10Hz and 20Hz tone. Auto power-off adds to its functionality. Models include: OPM220 and OPM220.

Finally, the compact and rugged Stabilized Light Sources from Tempo round out the tools for fiber installers. The portable light source which is critical when testing fiber optical cables and providing acceptance to all of the major fiber optic connectors. Features include dual and triple lasers; out of band testing at 1625nm and 1700nm; and a built-in VFL for visual fault locating and the polariscope interface. Models include: SLS520, SLS525, SLS530, SLS535, and SLS536.

"The features and benefits of Tempo's new OPMs and Stabilized Light Sources are numerous," said Keith Foord, fiber instruments product manager with Tempo Communications. "The new OPMs and Stabilized Light Sources make the installation and maintenance of fiber optic networks go smoothly. They can feel confident in the results provided, knowing the fiber optic cables are going in at cylinders."

#### OPTICAL WAVELENGTH SPLITTER

And if that weren't enough, Tempo rounded out the months of July with the launch of the game-changing Optical Wavelength Splitter (OWS200), which conveniently and cost-effectively separates the various wavelengths of a DWDM signal. The OWS200 is designed to measure each specific signal without the need for a costly CWDM or DWDM Optical Power Meter. Tempo's OWS200 is the perfect solution for technicians who demand performance and efficiency.

Tempo's new OWS200 delivers high accuracy to measure specific channel wavelengths. With the OWS200, a user can measure up to 16 wavelengths. The newly launched OWS410 or OWS420, can be used to measure each signal without purchasing an expensive CWDM or DWDM OPM.

The optical loss of the OWS200 is typically less than 1.0dB, because of this low insertion loss, it has a marginal influence on the overall system performance. Currently, the OWS200 supports two individual wavelengths, but for one and two wavelength applications, the OWS200 works with SC/APC connections and is must have for any fiber technician.

"This Optical Wavelength Splitter makes it easier and less expensive for fiber technicians to do their jobs," explained Foord. "Instead of investing in a very expensive DWDM power meter, they can use Tempo's OWS200 along with one of our standard OPMs to separate wavelengths and get an accurate measurement of the fiber network for optimum performance."

Tempo's comprehensive fiber solutions are designed for technicians who demand performance and efficiency. From Fusion Splices and Cleavers to OPMs, Stabilized Light Sources, Optical Visual Fault Locators, Fiber Hand Tools, and more—Tempo has everything the fiber technician needs to get the job with precision and confidence. Click [Here](#) for more information.

If there is a topic you'd like covered, please send your questions to [troy.anderson@tempocom.com](mailto:troy.anderson@tempocom.com)



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Reviewed Vision. Innovation. Forward.

September 24, 2020

Product Rebrand Update: Products now shipping out of Vista, CA  
All Greenlee Communications products have been successfully rebranded to Tempo Communications. For more information, please call 800-642-2150 or email [support@tempocom.com](mailto:support@tempocom.com). Below is a partial list of some of our previous tools and test equipment offered previously by the Tempo and Greenlee brands.

Tempo Branded:

- 710PG (Clam & box)
- 770PG (Clam & box)
- 776XZ
- 776X
- 776X (2000PG (2000P-6 + 77GX + 702K soft case))
- 771PG
- 771PG
- 801X (2000P + 77HPG (6A))
- 801X/S (2000P (5A + 77HPG (6A)))
- 801X-K (2000P (5A + 77HPG (6A)))
- 811X (2000P + 77HPG (6A))
- 811X/S (2000P (5A + 77HPG (6A)))
- 701X-K (2000P (5A + 77HPG (6A))) (box & clam)
- 701X-K (2000P (5A + 77HPG (6A)))
- 711K (77GX + 2000PG)
- 4208K (77GX + 2000PG)
- 6208K (77GX + 2000PG)
- PEK220 (24B + 2000PG)
- 24B
- 24BK (24B + 2000PG)
- 2009P

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PE2003 G Pulser Fault Locator Datasheet PULSER GROUND Queueup Resources Tempo

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## PULSER GROUND FAULT LOCATOR TESTING TROUBLESHOOTING

ACCURACY Product Features: The Pulser Ground Fault Locator identifies the exact location of even the smallest breaks in insulation by pulsing a high-voltage signal that radiates into the earth at the location of the faults. With the A-fram...

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