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Ermenrich 84550

Ermenrich Ping SM150 Underground Wire Locator User Manual

Model: 84550

1. INTRODUCTION AND OVERVIEW

The Ermenrich Ping SM150 is an advanced underground wire and pipe locator designed for professional and domestic use. This instrument facilitates the inspection and maintenance of electrical and cable networks, as well as water and gas pipes buried underground or concealed within walls and building foundations. It is capable of detecting both de-energized and energized cables up to 400V, identifying fuses, hidden cables, power outlets, and electrical panels.

Key functionalities include tracing wiring patterns and checking for anomalies such as short circuits and open circuits. The device also features a voltmeter function for detecting both DC and AC voltages. Both the transmitter and receiver units are equipped with integrated backlit LCD displays for clear readings and user-friendly button controls. Powered by rechargeable batteries, the SM150 incorporates an automatic shutdown feature to conserve power and extend operational life.



Underground Wire Locator Ping SM150



up to 2,5m
detection
depth

up to 2km
signal
transmission

FSTN LCD
backlit
display

5 year
warranty

Figure 1: Ermenrich Ping SM150 Transmitter and Receiver Units.

2. PRODUCT FEATURES

- **Underground and In-Wall Detection:** Locates cables and pipes buried in the ground or hidden within walls.
- **Versatile Voltage Detection:** Suitable for both de-energized and energized cables (up to 400V).
- **Comprehensive Location:** Identifies gas and water pipes, fuses, power outlets, and electrical panels.

- **Cable Integrity Testing:** Checks for wiring anomalies including short circuits and open circuits.
- **Voltmeter Function:** Detects DC and AC voltages.
- **Backlit LCD Displays:** Both transmitter and receiver feature clear, backlit screens for easy reading.
- **Rechargeable Batteries:** Both units are powered by rechargeable batteries.
- **Automatic Shutdown:** Power-saving feature to extend battery life.
- **Built-in Lights:** For working in dark conditions.
- **Adjustable Sensitivity:** Allows for precise detection.

Underground wire locator Ermenrich Ping SM150



Hidden wires and pipes detection



Cable tracing



Test cables for faults:
short circuits and open circuits



Voltmeter function



3. COMPONENTS INCLUDED

The Ermenrich Ping SM150 kit includes the following items:

- Transmitter Unit
- Receiver Unit
- 2 Alligator Clips (Red and Black)
- 2 Test Cables (Red and Black)
- 2 Probes (Red and Black)
- Ground Rod
- MicroUSB Cable
- Carry Bag
- User Manual and Warranty Card

The kit includes:



Transmitter



Receiver



Cable (2 pcs)



Probe (2 pcs)



Alligator clip (2 psc)



Ground rod



User manual and warranty card



Carry bag



Micro USB cable



Figure 3: Complete kit contents of the Ermenrich Ping SM150.

4. SETUP

- 1. Charging the Units:** Before first use, ensure both the transmitter and receiver units are fully charged using the provided MicroUSB cable. Connect the cable to the charging port on each unit and to a standard USB power adapter (not included). The battery indicator on the display will show charging status.
- 2. Attaching Test Leads:**

- Connect the red test cable to the red terminal and the black test cable to the black terminal on the transmitter.
 - Attach the alligator clips or probes to the ends of the test cables as required for your application.
3. **Powering On:** Press and hold the power button on both the transmitter and receiver units until their respective displays illuminate.
 4. **Initial Settings:** Familiarize yourself with the buttons on both units. Use the arrow keys to navigate menus and adjust settings such as signal level and code. Refer to the detailed instructions in the included user manual for specific setting adjustments.

Transmitter



Operating voltage range
(DC): 12–400V



Power supply:
1400 mAh Li-Po battery



Auto power off
after 15 min of inactivity



Figure 4: Transmitter unit with illuminated display and controls.

5. OPERATING INSTRUCTIONS

5.1. Basic Wire Tracing

1. **Connect Transmitter:** Connect the transmitter to the wire or pipe you wish to trace. For de-energized circuits, connect one lead to the target wire and the other to a known ground (using the ground rod if necessary). For energized circuits, connect directly to the live wire, ensuring safety precautions are

followed.

2. **Activate Transmitter:** Turn on the transmitter and select an appropriate signal level.
3. **Use Receiver:** Turn on the receiver. Hold the receiver unit and move it along the suspected path of the wire or pipe. The display will show signal strength, and an audible tone will indicate proximity to the signal.
4. **Adjust Sensitivity:** Adjust the receiver's sensitivity as needed to pinpoint the exact location. Higher sensitivity is for deeper or weaker signals, lower sensitivity for precise localization.

5.2. Voltage Detection

1. **Select Voltmeter Mode:** On the transmitter, select the voltmeter function.
2. **Connect to Circuit:** Connect the test leads to the circuit where you want to measure voltage.
3. **Read Display:** The display will show the detected DC or AC voltage.

5.3. Fault Detection (Short/Open Circuits)

1. **Isolate Circuit:** Ensure the circuit is de-energized before performing fault detection.
2. **Connect Transmitter:** Connect the transmitter to the ends of the cable segment you wish to test.
3. **Analyze Signal:** Use the receiver to trace the cable. A sudden loss of signal indicates an open circuit. A strong signal where it shouldn't be may indicate a short circuit or unintended connection.

Your browser does not support the video tag.

Video 1: Overview of Ermenrich Ping SM150 features and operation, demonstrating cable and pipe detection, tracing, and integrity testing. This video highlights the device's capabilities including detection range, signal transmission, backlit display, built-in lights, and rechargeable battery power.

6. SPECIFICATIONS

Feature	Specification
Brand	Ermenrich
Model Number	84550
Manufacturer Code	84550
Power Source	Battery
Battery Type	Lithium Ion (1 non-standard battery included per unit)
Max. Voltage Detection	400 V (DC/AC)
Display	Backlit LCD
Automatic Shutdown	Yes
Country of Origin	China

7. TROUBLESHOOTING

- **No Signal Detected:**

- Ensure both transmitter and receiver are powered on.
- Check battery levels on both units. Recharge if necessary.
- Verify proper connection of test leads to the target wire/pipe and ground.
- Increase receiver sensitivity.
- Ensure the transmitter is set to an appropriate signal level.
- **Weak or Intermittent Signal:**
 - Increase receiver sensitivity.
 - Move the receiver closer to the suspected path of the wire/pipe.
 - Check for strong electromagnetic interference from other devices.
 - Ensure the ground connection is secure and effective.
- **Inaccurate Readings:**
 - Reduce receiver sensitivity for more precise localization.
 - Ensure there are no other active signals or wires in close proximity that could cause interference.
 - Recalibrate the device if a calibration option is available (refer to the full user manual).
- **Unit Not Turning On:**
 - Check battery charge.
 - Ensure the power button is pressed and held for the required duration.

8. MAINTENANCE

- **Cleaning:** Wipe the units with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the device and its accessories in the provided carry bag in a cool, dry place away from direct sunlight and extreme temperatures.
- **Battery Care:** Recharge the batteries regularly, even if the device is not in frequent use, to maintain battery health. Avoid fully discharging the batteries for extended periods.
- **Inspection:** Periodically inspect test leads, clips, and probes for any signs of wear or damage. Replace damaged components immediately to ensure safe and accurate operation.

9. WARRANTY AND SUPPORT

The Ermenrich Ping SM150 Underground Wire Locator comes with a standard warranty. Please refer to the included warranty card for specific terms and conditions, including the warranty period and coverage details. For technical support, service, or inquiries regarding replacement parts, please contact Ermenrich customer service through their official website or the contact information provided in your warranty documentation.

Note: Unauthorized repairs or modifications may void your warranty. Always use genuine Ermenrich replacement parts and accessories.



Figure 5: Information on extended warranty and company background.