

## Proceq 38160000

# Resipod 38mm Concrete Surface Resistivity Meter User Manual

Brand: Proceq | Model: 38160000

## 1. INTRODUCTION AND PRODUCT OVERVIEW

The Resipod is a comprehensive solution designed for accurately measuring the electrical resistivity of concrete. It is suitable for both laboratory use under controlled conditions and on-site applications. This device is known for its reliability, accuracy, and rugged, waterproof construction.

The Resipod Geometric model includes a standard fixed spacing surface Wenner probe, with additional accessories for variable spacing and bulk resistivity measurements. The ResipodLink software allows users to input correct probe spacing and geometric correction factors, providing direct resistivity readings on the instrument. Users can also apply self-determined correction factors.

### Key Applications:

- Estimation of corrosion rates in concrete structures.
- Assessment of concrete resistance to aggressive agents.
- Evaluation of concrete homogeneity and curing conditions.
- Checking fiber distribution in steel fiber reinforced concrete.
- Identification of wet and dry areas within a concrete structure.
- Correlation to water permeability of rock.
- Indication of variations in water/cement ratios within a concrete structure, including areas most susceptible to chloride penetration.

## 2. PACKAGE CONTENTS AND SETUP

Before beginning, ensure all components are present and undamaged. The standard package includes:

- Resipod Geometric Instrument (38mm probe spacing)
- Test Strip
- Foam Contact Pads
- Charger with USB Cable
- Carrying Strap
- Documentation (User Manual, Calibration Certificate)
- Protective Carrying Case

- Resipod Geometric Accessory (stand for mounting and variable spacing probe)

## Initial Setup:

1. **Charging the Battery:** Connect the Resipod to the charger using the provided USB cable. Ensure the device is fully charged before first use. A full charge provides over 8 hours of operation in standard mode, or over 50 hours autonomy.
2. **Attaching the Carrying Strap:** Securely attach the carrying strap to the designated points on the Resipod for ease of transport and handling.
3. **Familiarization with Probes:** The Resipod Geometric comes with a 38mm fixed spacing probe and a variable spacing probe (40mm to 70mm). Select the appropriate probe based on the aggregate size of the concrete being tested.
4. **Software Installation (Optional):** For advanced data management and correction factor input, install the ResipodLink software on a compatible computer. Refer to the software's specific instructions for installation.

## 3. OPERATING INSTRUCTIONS

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### Performing a Measurement:

1. **Prepare the Surface:** Ensure the concrete surface is clean and free from loose debris. For optimal contact, use the provided foam contact pads if necessary.
2. **Position the Resipod:** Place the Resipod's probes firmly onto the concrete surface. Ensure all four electrodes make good contact. For the variable spacing probe, adjust the spacing as required for the specific test.
3. **Initiate Measurement:** The device will automatically begin the measurement once stable contact is established. The resistivity reading will be displayed on the instrument's screen.
4. **Record Readings:** Note down the displayed resistivity value. For comprehensive analysis, consider recording environmental conditions and specific test locations.



Figure 3.1: The Resipod Geometric with a 38mm probe array positioned on a concrete cylinder for resistivity measurement. The device is connected via cables to the probe setup.



Figure 3.2: A close-up view of the handheld Resipod device displaying a resistivity reading (160.8 kΩcm) while placed on a concrete sample.

## Using ResipodLink Software:

- **Data Transfer:** Connect the Resipod to your computer using the USB cable. Use the ResipodLink software to download stored measurement data.
- **Probe Spacing Correction:** Within the software, accurately enter the probe spacing used for the measurement. This ensures the correct resistivity value is calculated and displayed.
- **Geometric Correction Factor:** Apply the appropriate geometric correction factor based on the geometry of the concrete element being tested (e.g., slab, column, rebar presence).
- **Custom Correction Factors:** The software allows for the input of user-determined correction factors for specialized applications.

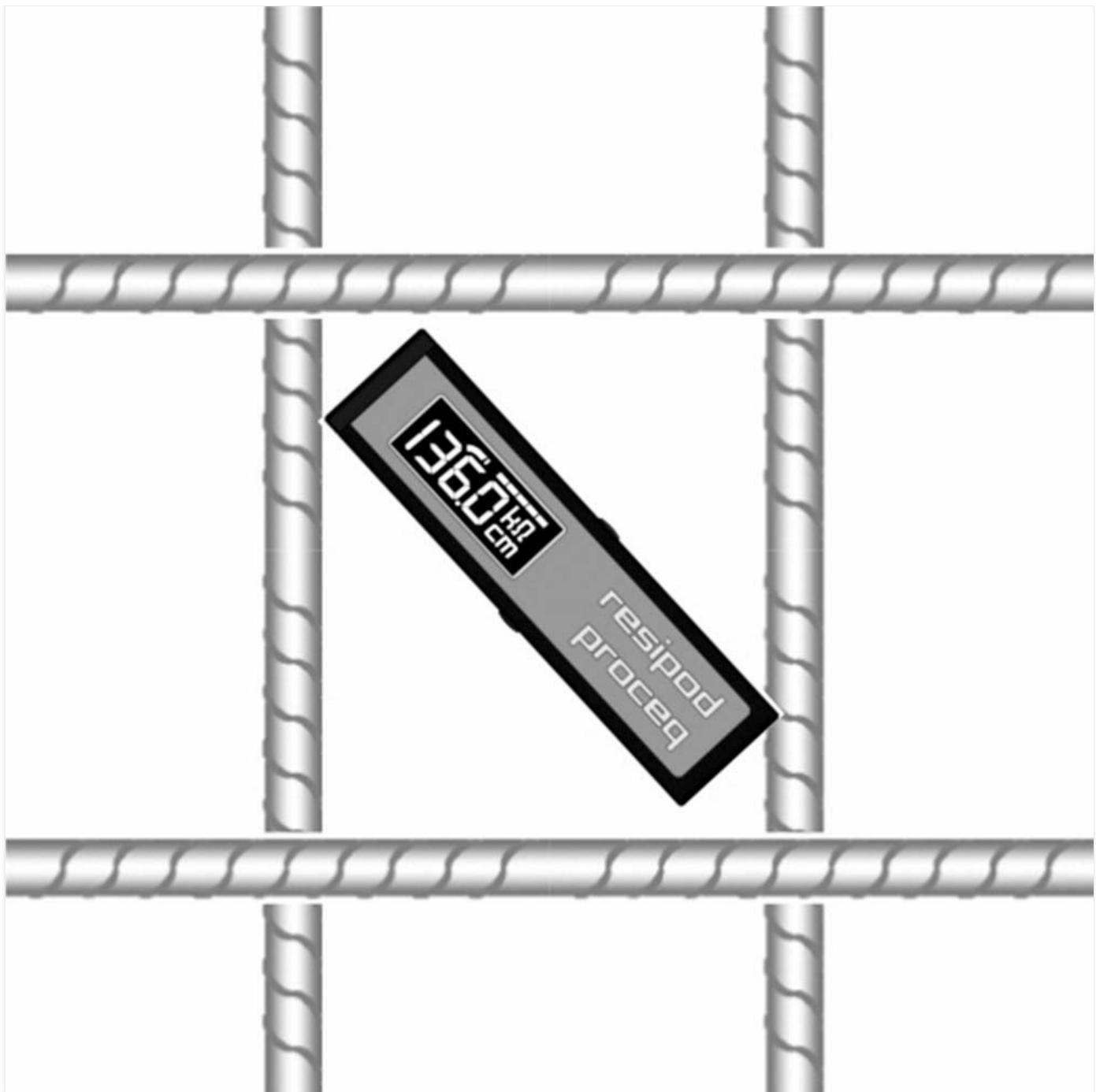


Figure 3.3: The Resipod device positioned on a grid of rebar, illustrating its application in environments with steel reinforcement.

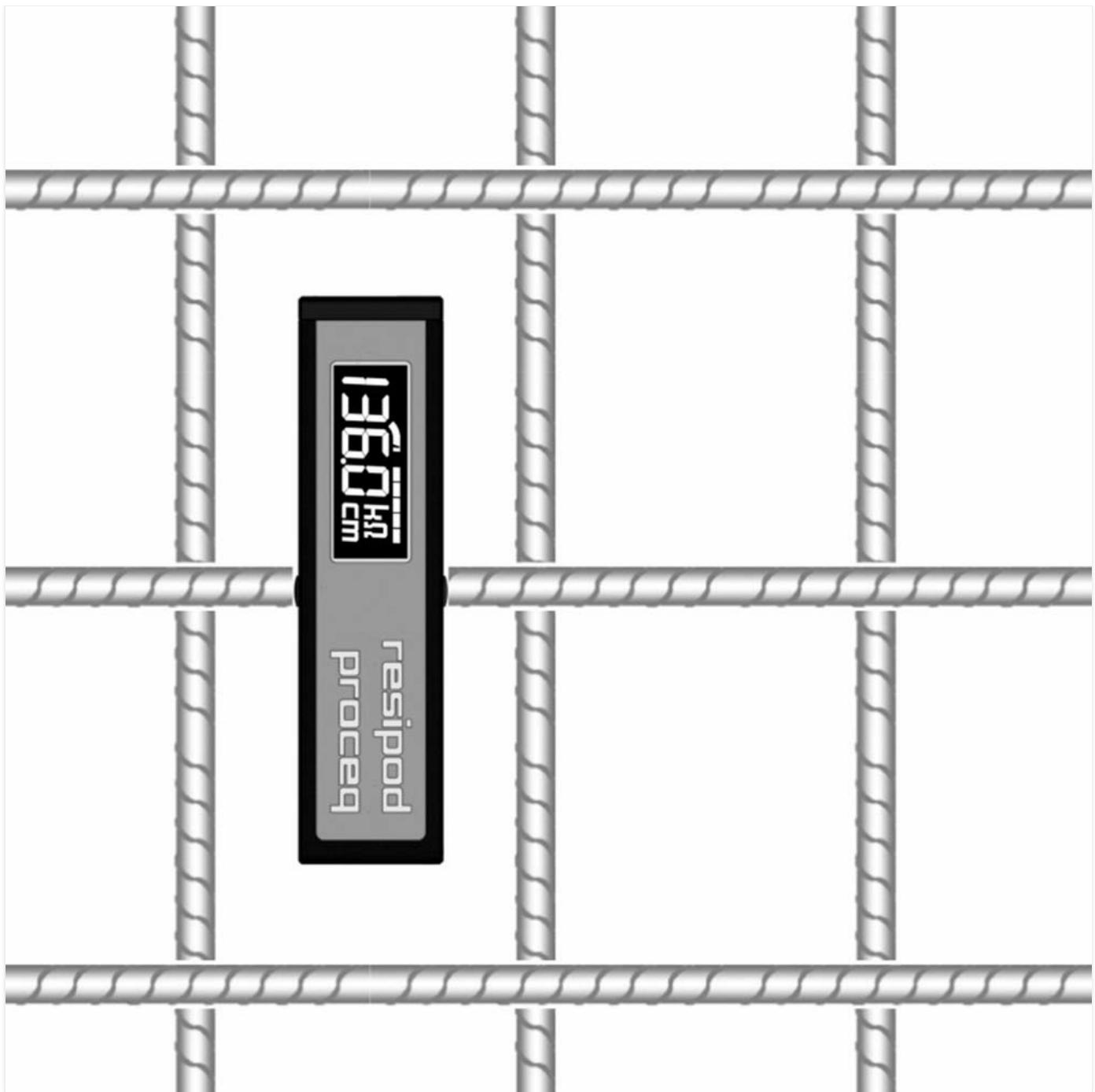


Figure 3.4: Another perspective of the Resipod device placed on a rebar grid, demonstrating its compact size and ease of placement.

## 4. MAINTENANCE

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Proper maintenance ensures the longevity and accuracy of your Resipod instrument.

- **Cleaning:** After each use, wipe the probes and the instrument body with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure no moisture enters the charging port or other openings.
- **Storage:** Store the Resipod in its protective carrying case when not in use. Keep it in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Battery Care:** For long-term storage, ensure the battery is partially charged (around 50%). Avoid fully discharging the battery for extended periods.
- **Probe Inspection:** Regularly inspect the probes for wear or damage. Damaged probes can affect measurement accuracy and should be replaced.
- **Calibration:** While the Resipod is designed for high accuracy, periodic calibration by an authorized service center is

recommended to maintain optimal performance.

## 5. TROUBLESHOOTING

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This section addresses common issues you might encounter with your Resipod.

Problem	Possible Cause	Solution
No reading or unstable reading	Poor contact with concrete surface; Damaged probes; Low battery	Ensure firm and even pressure on probes; Use foam contact pads; Inspect probes for damage and replace if necessary; Charge the battery.
Inaccurate readings	Incorrect probe spacing entered in software; Environmental factors (e.g., extreme temperature, moisture); Uncalibrated device	Verify probe spacing in ResipodLink software; Ensure testing conditions are within specified operating range; Consider professional calibration.
Device does not power on	Battery fully discharged; Device malfunction	Connect to charger and allow sufficient charging time; If issue persists, contact Proceq support.

If you encounter issues not listed here or if the suggested solutions do not resolve the problem, please contact Proceq customer support.

## 6. TECHNICAL SPECIFICATIONS

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Parameter	Value
Battery	3.6 V, 50.76Wh
Battery Lifetime	> 8h (in standard operating mode); > 50 hours autonomy
IP Classification	IP67; Meets AASHTO T 358 standard
Measurement Range	0.1 – ca. 1000 kΩcm (depending on probe spacing)
Resolution (nominal current 200µA)	±0.2 kΩcm or ±1% (whichever is greater)
Resolution (nominal current 50µA)	±0.3 kΩcm or ±2% (whichever is greater)
Resolution (nominal current <50µA)	±2 kΩcm or ±5% (whichever is greater)
Frequency	40 Hz
Item Weight	7.72 Pounds
Manufacturer	Proceq S.A.
Standards and Guidelines	BS 1881-204, DIN 1045, DGZfP B2, SN 505262, SS 78-B4, DBV guidelines, CE certification

## 7. WARRANTY AND SUPPORT

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### Warranty Information:

The Resipod instrument is covered by the standard Proceq warranty:

- **Electronics:** 2-year warranty
- **Mechanical Components:** 6-month warranty

Please retain your proof of purchase for warranty claims.

### Customer Support:

For technical assistance, service, or warranty inquiries, please contact Proceq customer support. Refer to the official Proceq website or the documentation included with your product for the most current contact information.

Manufacturer: Proceq S.A.

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