

# Low-Temperature Battery Installation & Operation Guide for Total Station Equipment

## Purpose

This guide provides general installation and operating instructions for low-temperature lithium battery packs used with total stations and surveying equipment.

## Safety

1. Verify the battery model matches your equipment.
2. Inspect the battery for damage before use.
3. Do not short-circuit, puncture, or expose to fire.
4. Use only the approved charger.

## Installation

1. Turn off the total station.
2. Remove the original battery and inspect the contacts.
3. Align the replacement battery with the battery compartment.
4. Slide or press the battery into place until it locks securely.
5. Power on the instrument and verify the battery indicator.

## Operation in Cold Environments

- Operating range: typically -40°C to +85°C (model dependent).
- Keep spare batteries insulated before use.
- Avoid rapid temperature changes that may cause condensation.
- Recharge batteries at the temperature specified by the manufacturer.

## Charging

Charge with the designated charger. Disconnect after charging is complete. Store at 40–60% state of charge for long-term storage.

## Maintenance

Clean battery contacts regularly, avoid moisture ingress, and inspect for mechanical damage after field work.

## Troubleshooting

Battery not recognized: Reinstall and clean contacts.

Short runtime: Fully recharge or replace aged battery.

Cannot charge: Verify charger compatibility and ambient temperature.

## Note

Connector type, voltage, capacity, and installation method may vary by total station brand and battery model. Follow your equipment manufacturer's requirements where applicable.