

PowerLogic™ ION7550 / ION7650

Energy and power quality meter

Battery Replacement Instructions



Hazard Categories and Special Symbols

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, can result in death or serious injury.



CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, can result in minor or moderate injury.

CAUTION

CAUTION used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, can result in property damage.



Provides additional information to clarify or simplify a procedure.

PLEASE NOTE

Electrical equipment should be installed, operated, serviced and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

FCC Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The Ringer Equivalence Number (REN) for the ION7550 / ION7650 optional internal modem is 0.6. Connection to the ION7550 / ION7650 internal modem should be made via an FCC Part 68 compliant telephone cord (not supplied). The ION7550 / ION7650 cannot be used on a public coin phone service or party line services.

Network Compatibility Notice for the Internal Modem

The internal modem in meters equipped with this option is compatible with the telephone systems of most countries in the world. Use in some countries may require modification of the internal modem's initialization strings. If problems using the modem on your phone system occur, please contact Schneider Electric Technical Support.

Standards Compliance



CSA: Certified to CAN/ Certified to
CSA C22.2 No.1010-1 UL 3111

Made by Power Measurement Ltd.

Covered by one or more of the following patents:

U.S. Patent No's 7010438, 7006934, 6990395, 6988182, 6988025, 6983211, 6961641, 6957158, 6944555, 6871150, 6853978, 6825776, 6813571, 6798191, 6798190, 6792364, 6792337, 6751562, 6745138, 6737855, 6694270, 6687627, 6671654, 6671635, 6615147, 6611922, 6611773, 6563697, 6493644, 6397155, 6236949, 6186842, 6185508, 6000034, 5995911, 5828576, 5736847, 5650936, D505087, D459259, D458863, D443541, D439535, D435471, D432934, D429655, D427533.

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Introduction

PowerLogic ION7550 / ION7650 meters come equipped with a permanently installed battery that maintains the meter’s real time clock and non-volatile memory (NVRAM) during the absence of power to the meter.

In the event the meter’s factory-installed battery discharges, an additional auxiliary battery can be installed on the meter’s communications card (Comm Card). Once the new battery is in place, the old battery is disconnected by removing a jumper on the meter’s main board.

Symptoms of a Discharged Battery

- ◆ Meter clock loses time or changes to a random time/date
- ◆ Meter logs 461, 451, 450, or 600 events

CAUTION

RISK OF DATA LOSS

When the auxiliary battery is in use, removing the communications card from the meter can cause up to 10 minutes worth of time and data loss.

- Ensure all important data from the meter has been retrieved before removing the communications card.

Failure to follow these instructions can result in permanent data loss.

Battery Specifications

Type	AA size lithium LiSOCl ₂
Nominal Capacity	2.4 Ah
Rated Voltage	3.6 V
Manufacturer	Saft
Model Number	LS14500

NOTE

The replacement battery must be the exact model number for proper meter operation and to meet CSA product safety requirements. Purchasing the battery directly from Schneider Electric ensures the correct battery is used. A typical AA battery suitable for household electronics will not work in the meter.



WARNING

HAZARD OF FIRE, EXPLOSION OR CORROSIVE FUMES

Exposing any lithium battery to heat can cause electrolyte decomposition, flammable or corrosive fume venting, or battery explosion.

- Do not heat the battery above 100°C (212°F) or incinerate it.
- Dispose of the battery according to local regulations.

Failure to follow these instructions can result in death or serious injury.

NOTE: Materials safety data sheets (MSDS) are available from the battery manufacturer or Schneider Electric.

Before You Begin



HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practises such as NFPA 70E.
- This equipment must only be installed and serviced by qualified, licensed electrical personnel.
- Equipment mounting and installation must conform to all applicable local electrical codes.
- Install meter bypass switches, PTs, CTs and shorting blocks to conform to all applicable local electrical codes.
- Never short the secondary of a PT.
- Never open circuit a CT; use the shorting block to short circuit the leads of the CT before removing the connection to the power meter.
- Never operate a CT with an open secondary.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.
- The successful operation of this equipment depends upon proper handling, installation, and operation. Neglecting fundamental installation requirements may lead to personal injury as well as damage to electrical equipment or other property.

Failure to follow these instructions will result in death or serious injury.

Before performing any service on the meter:

- ◆ Familiarize yourself with the steps in this guide.
- ◆ Complete the following steps before attempting any retrofits:
 1. Wear an anti-static wrist strap.
 2. Ensure all important data from the meter (for example, revenue values) has been retrieved.
 3. Turn off ALL power to the meter, including high voltage digital inputs and relay connections.
 4. Use a properly rated voltage sensing device to confirm power is OFF.
 5. Open all PT fuses (or direct voltage input fuses).
 6. Close all CT shorting blocks.
 7. Ensure that all cables still connected to the meter are NOT live.

CAUTION

RISK OF DAMAGE TO METER

Components inside the meter are extremely sensitive to electrostatic discharge.

- Wear an anti-static wrist strap at all times when working inside the unit.

Failure to follow these instructions can result in damage to the meter and will void the meter's warranty.

Your kit contains:

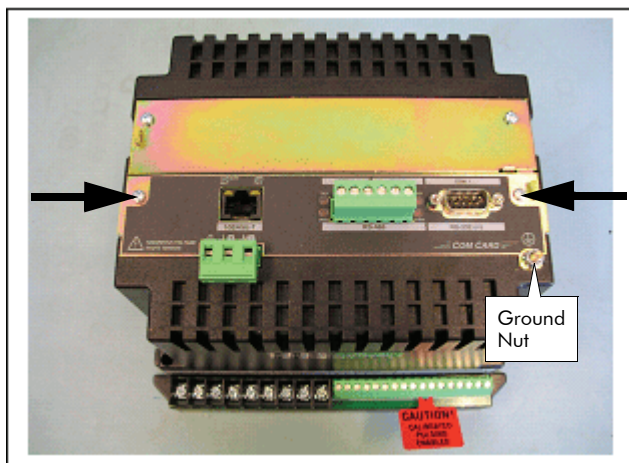
- ◆ One lithium replacement battery
- ◆ One zap strap (cable tie)

Recommended Tools

- ◆ Phillips #1 screwdriver
- ◆ Small adjustable wrench
- ◆ Precision flat-head screwdriver (for captured-wire connectors)
- ◆ Small slot screwdriver
- ◆ Needle-nose pliers
- ◆ Anti-static wrist strap

Step 1: Removing the Comm Card

1. Disconnect all wires connected to the Comm Card. Labelling the wires with tape can help when re-connecting them.
2. Remove the two screws and lockwashers from the Comm Card at the back of the meter, using a Phillips #1 screwdriver (see arrows below). Remove the ground nut, using a small adjustable wrench.



3. Remove the Comm Card by grasping it on the sides of its backplate (see below) and carefully pulling it out of the socket, away from the chassis. If the card sticks in the meter, wedge the tip of a flathead screwdriver between the card's backplate and the meter chassis and gently pry the card loose.

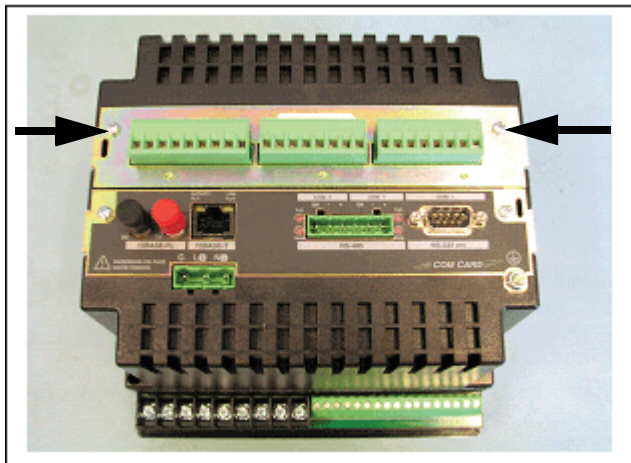


Step 2: Removing the I/O Card (or faceplate)

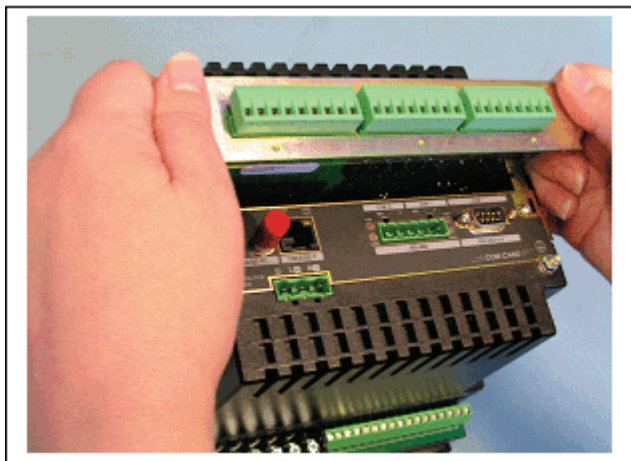
NOTE

If the meter does not have an I/O Card installed, remove the blank faceplate on the back of the meter instead. Remove the two screws and lockwashers that attach the faceplate, using a Phillips #1 screwdriver.

1. Disconnect all wires connected to the I/O Card. Labelling the wires with tape can help when re-connecting them.
2. Remove the two screws and lockwashers from the I/O Card at the back of the meter, using a Phillips #1 screwdriver (see arrows below).



3. Remove the I/O Card by grasping it on the sides of its backplate (see below) and carefully pulling it out of the socket, away from the chassis. If the card sticks in the meter, wedge the tip of a flathead screwdriver between the card's backplate and the meter chassis, and gently pry the card loose.

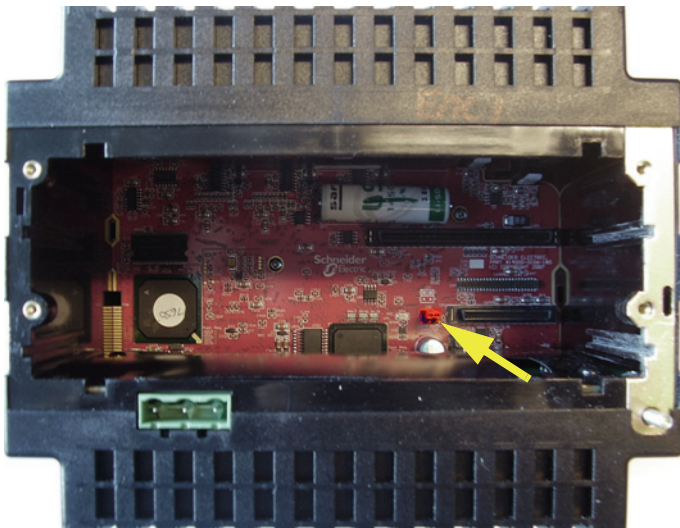


Step 3: Removing the jumper (if applicable)

NOTE

This step only applies if the meter is still using the factory-installed main board battery and you have never inserted a battery on the meter's Comm Card. Removing this jumper disables the main board battery.

1. Using needle-nose pliers, carefully pull the jumper off the header connector on the main board, next to the CPU (see arrow below). With the Comm and I/O Cards removed, you can access the header and jumper via the opening in the back the meter.

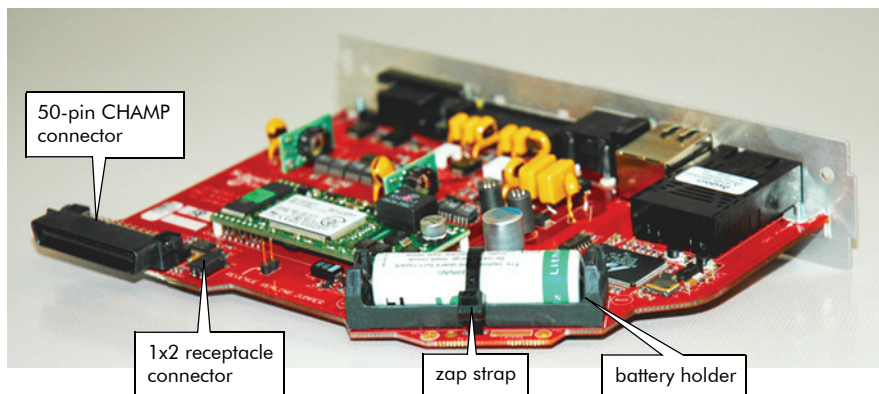


2. Discard the jumper after removal. It is not necessary to remove the main board battery.

Step 4: Replacing the battery

1. Replace the battery as follows, depending on your situation:
 - ◆ Insert the new battery into the holder on the new Comm Card.
 - OR
 - ◆ Remove the existing battery from the Comm Card and insert the new one.

Ensure the battery's + and – terminals are correctly aligned in the holder.
2. Secure the battery with the zap strap, as shown below. Trim off excess strap material.



Step 5: Re-installing the Comm Card

1. Insert the Comm Card by sliding the edges of the circuit board down the slots along each side of the chassis.
2. Align the CHAMP connector with the socket and press the card firmly into place. The socket and the connector are polarized, so the pins in the connector will not fit into the socket if the card is not oriented correctly.
3. Ensure the header connector on the main board fits securely into the receptacle connector on the Comm Card.
The Comm Card is securely inserted into the socket when the backplate of the card meets the chassis of the meter.
4. Secure the card with the two screws, lockwashers and the ground nut. They must be tightened firmly to preserve transient immunity. Ensure the ground wire is connected to the meter protective ground terminal (for example, ground nut/lug/post etc.).
5. Re-connect the wires to the Comm Card as required. See the Installation Guide for more details.

Step 6: Re-installing the I/O card (or faceplate)

 NOTE

If the meter does not have an I/O Card installed, install the blank faceplate on the back of the meter instead. Replace the two screws and lockwashers that attach the faceplate, using a Phillips #1 screwdriver.

1. Insert the I/O Card by sliding the edges of the circuit board down the slots along each side of the chassis.
2. Align the connector with the socket and press the card firmly into place. The socket and the connector are polarized, so the pins in the connector will not fit into the socket if the card is not oriented correctly. The I/O Card is securely inserted into the socket when the backplate of the card meets the chassis of the meter
3. Replace the two screws and lockwashers. They must be tightened firmly to preserve transient immunity.
4. Re-connect the wires to the I/O Card as required. See the Installation Guide for more details.

Step 7: Re-powering the meter

 NOTE

The meter protective ground terminal must be connected to ground (earth) before any power is applied to the meter terminals.

1. Close the PT fuses (or direct voltage input fuses) and open the CT shorting blocks.
2. Turn on power to the meter and verify the correct operation of the unit.

Step 8: Resetting the meter clock

Replacing the battery will cause the meter clock to lose time. Be sure to reset the meter to the correct time and date after re-powering. This can be done via the front panel's Time Setup menu or using ION software.

PowerLogic ION7550 / ION7650

with WebMeter™ and MeterM@il™

Battery Replacement Instructions

For further assistance
please contact us at:

Schneider Electric

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Canada V8M 2A5
Tel: 1-250-652-7100

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Lavergne, TN 37086
USA
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Getting technical support:
Contact your local Schneider Electric sales
representative for assistance or go to the
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