PowerLogic ION8800

Energy & Power Quality Meter

Field Retrofit Instructions
June 2006

Schneider Electric

Danger

This symbol indicates the presence of dangerous voltage within and outside the product enclosure that may constitute a risk of electric shock, serious injury or death to persons if proper precautions are not followed.

Caution

This symbol alerts the user to the presence of hazards that may cause minor or moderate injury to persons, damage to property or damage to the device itself, if proper precautions are not followed. **Consult this document whenever this symbol is used on the meter, to determine the nature of the potential hazard and any actions which need to be taken.**

Note

This symbol directs the user's attention to important installation, operating and maintenance instructions.

Retrofit Considerations

Retrofit and maintenance of the ION8800 meter should only be performed by qualified, competent personnel that have appropriate training and experience with high voltage and current devices. The meter must be installed in accordance with all local and national electrical codes.

If this equipment is used in a manner not specified by the manufacturer, the protection from electric shock, fire, etc. provided by this equipment may be impaired.

⚠ DANGER

Failure to observe the following instructions may result in severe injury or death.

- ◆During normal operation of the ION8800 meter, hazardous voltages are present on its connector pins, and throughout the connected potential transformer (PT), current transformer (CT), direct connect without PTs, digital (status) input, control power and external I/O circuits. PT and CT secondary circuits are capable of generating lethal voltages and currents with their primary circuit energized. Follow standard safety precautions while performing any installation or service work (i.e. removing PT fuses, shorting CT secondaries, etc).
- ◆Do not use digital output devices for primary protection functions. These include applications where the devices perform energy limiting functions or provide protection of people from injury. Do not use the ION8800 in situations where failure of the devices can cause injury or death, or cause sufficient energy to be released that can start a fire. The meter can be used for secondary protection functions.
- ◆The ION8800 meter's chassis ground must be properly connected to a good earth ground for safety, and for the noise and surge protection circuitry to function correctly. Failure to do so will void the warranty, and create a risk of electric shock, injury or death.
- ◆When installing the meter, all voltage paths (measurement voltage and all auxiliary circuits such as the power supply and the tariff control voltage) must be fused according to applicable local safety standards.

⚠ CAUTION

Observe the following instructions, or permanent damage to the meter may occur.

- ◆The ION8800 meter offers a range of hardware options that affect input ratings. The ION8800 meter's serial number label lists all equipped options. Applying current levels incompatible with the current inputs will permanently damage the meter. This document provides installation instructions applicable to each hardware option.
- ◆Do not HIPOT/Dielectric test the digital (status) inputs, digital outputs, power supply terminals or communications terminals. Refer to the label on the ION8800 meter for the maximum voltage level the device can withstand.
- ◆Replacing the meter battery with the wrong type or voltage rating could result in damage to the meter. Use only a lithium $LiSOCl_2$ battery with a rated voltage of 3.6 V, and the same construction as the original battery, as a replacement.

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

CE

Made by Power Measurement Ltd.

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Before You Begin

⚠ DANGER

During normal operation of the meter, hazardous voltages are present which can cause severe injury or death. These voltages are present on the terminal strips of the device and throughout the connected potential transformer (PT), current transformer (CT), status input, relay, and control power circuits. Only qualified, properly trained personnel should perform installation and servicing.

Before performing any service on the PowerLogic ION8800 meter:

- Familiarize yourself with the steps in this guide.
- Read the safety precautions on the "Service Considerations" page.
- Complete the following steps before attempting any retrofits.

1. Turn off **ALL** power to the meter.
2. Remove the meter from the rack.
3. Ensure that all cables still connected to the meter are **NOT** live.
4. Disconnect the ground wire **LAST**.

⚠ CAUTION

The components inside the meter are extremely sensitive to electrostatic discharge. To prevent damage to the unit, wear an anti-static wrist strap at all times when working inside the unit. Failure to use proper equipment during servicing will void the meter's warranty.

Recommended Tools

- #1 Phillips screwdriver (for battery cover)
- Precision flat-head screwdriver (for captured-wire connectors on Comm Module)
- Anti-static wrist strap

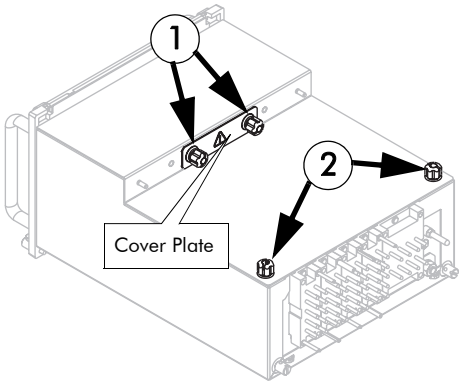
Communications Module Installation

The Communications (Comm) Module attaches to the meter via a connector and is held in place by two thumbscrews.

New Installation

If you are installing a Comm Module on this meter for the first time:

1. Remove the cover plate from rear of meter by removing the two thumbscrews holding the plate in place.
2. Remove the two thumbscrews from the top rear of meter.

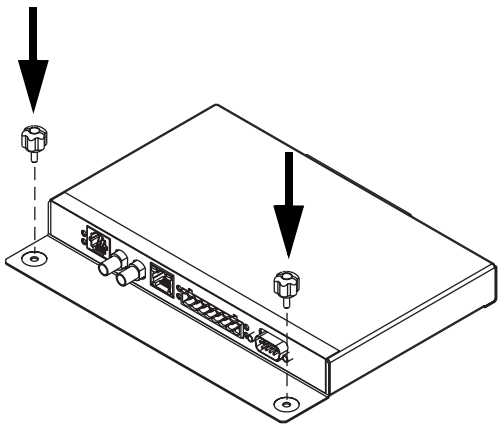


3. Keep all parts for future use. Skip to step 4 below.

Replacement

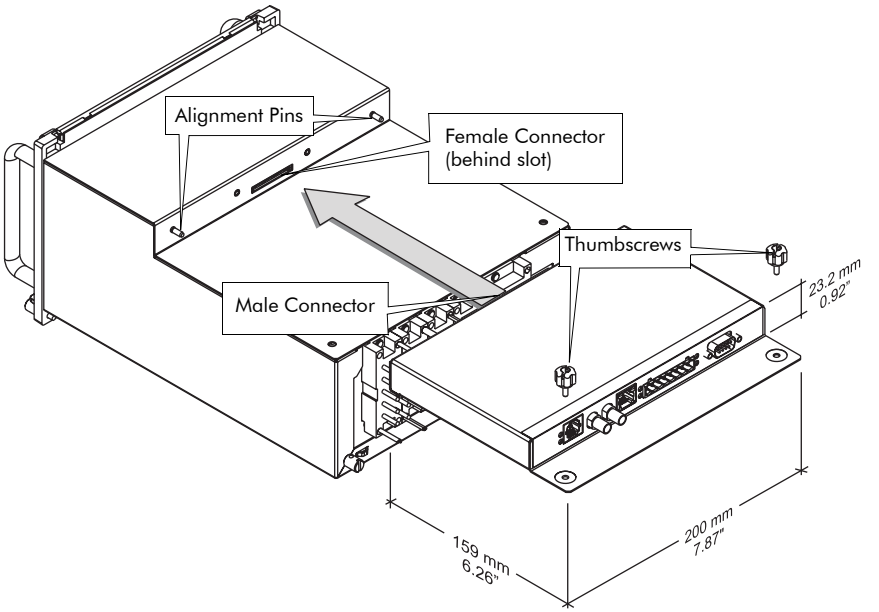
If you are replacing an existing Comm Module on your meter:

1. Disconnect all wires connected to the Comm Module. Labelling the wires with tape may help when re-connecting them to the new module.
2. Remove the two thumbscrews from the back of the module (see arrows below).



3. Remove the old Comm Module by carefully pulling it out of the socket, and away from the meter.
4. Insert the new Comm Module by sliding the module along the top of the meter, lining up the meter's alignment pegs and corresponding module holes, and pressing the module firmly into place. The male connector will not fit into the female connector (behind the slot) if the module is not seated correctly. The Comm Module is installed properly when the thumbscrews line up with their holes in the meter.
5. Replace the two thumbscrews. They must be tightened firmly by hand to ensure proper grounding of the Comm Module.
6. Re-connect the ground wire.
7. Re-connect the wires to the Comm Module as required. See the Installation Guide for more details.
8. Re-install the meter in the rack.
9. Turn on power to the meter and verify the correct operation of the unit.

Installation Diagram



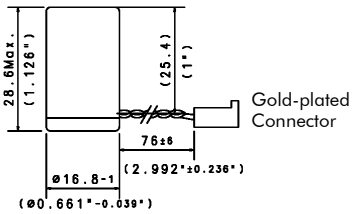
Replacing the Battery

The battery in the ION8800 meter keeps the real time clock running when supply power is lost. Replace the battery if the meter has been stored for an extended period of time without power (longer than two years). If the meter will be without power for an extended length of time, disconnect the battery so that the battery maintains its 10-year shelf life.

Battery Specifications

Type	Lithium $LiSOCl_2$
Nominal Capacity	1.0 Ah
Rated Voltage	3.6 V
Connector	Gold-plated

Battery Dimensions



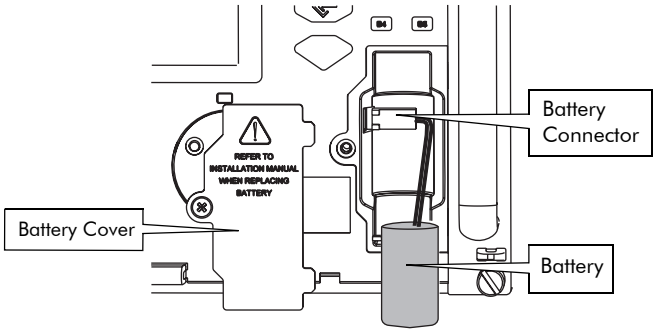
The battery can be changed when the meter is either powered or unpowered.

NOTE

Replacing the battery on an unpowered meter resets the internal clock and may affect revenue parameters.

To replace the battery

1. Open the front cover of the meter.
2. Remove the Phillips screw that holds the battery cover in place and remove the battery cover.
3. Remove the battery from the housing and disconnect the battery connector from the meter.



4. Connect the new battery's wire to the meter. and place the battery in the housing.
5. Replace the battery cover and the Phillips screw.
6. Close the cover of the meter.

For further assistance
please contact us at:

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Getting technical support:

Contact your local Schneider Electric sales representative for assistance or go to the www.powerlogic.com website.

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