

Upgrade meter firmware to v3.0.0

This document describes the procedure to upgrade PowerLogic™ ION9000, PM8000 or ION7400 series meters to the latest firmware version.

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Upgrade overview

It is recommended to upgrade PowerLogic™ ION9000, PM8000, and ION7400 series meters to the latest firmware version.

Before upgrading to the latest version, firmware version 2.1.0 must have been previously installed. Go to www.se.com and search for Upgrading Meter Firmware to v2.1.0 document for information on that upgrade. Firmware version can be identified using the display, webpages and using ION Setup.

Meter firmware includes a digital signature which helps ensure authenticity.

How to get meter upgrades

Go to www.se.com and download a firmware upgrade ZIP file.

To find a recent firmware package, search for your meter type and Firmware and Associated Files.

Upgrade information

Meter firmware

A meter that has been upgraded to firmware version 3.0.0 or later cannot be downgraded to an earlier firmware version.

NOTICE

LOSS OF DOWNGRADE CAPABILITY

Do not upgrade to firmware version 3.0.0 or later if you need to downgrade the meter in the future.

Failure to follow these instructions can result in loss of firmware downgrade functionality.

Upgrade agent

After upgrading the meter firmware to v2.2.1 or later, the previous upgrade agent cannot be re-applied.

Restart requirement

Meter restart is required.

Upgrades and security configuration

When meter firmware or ION Setup software is upgraded – security configuration remains the same until changed, including usernames and passwords. It is recommended security configuration is reviewed after an upgrade to analyze privileges for new or changed device features and revoke or apply them according to your company’s policies and standards.

Legacy security support

Legacy security support is an interim solution for users that use Standard security mode and is the default setting for new meters. It provides backwards compatibility with older software communicating with the meter using ION protocol.

If Standard security was used before upgrading meter firmware to v3.0.0, Legacy security support is enabled.

If Advanced security was used before upgrading meter firmware to v3.0.0, Advanced security is enabled.

It is recommended to use Advanced security mode.

Legacy security support username	Legacy security support password	Legacy security support password range	Legacy security support password limit
User1	<ul style="list-style-type: none"> Same password used before upgrade to firmware version 3.0.0., or 0 (zero) for new meters. 	0 to 99999999	8 characters

Switch ION Setup into Advanced mode to setup multiple user accounts for meters using Legacy security support: Open ION Setup > Ctrl + click on the meter to select it.

Meter firmware upgrade prerequisites

Perform back ups of all meter data, download latest ION Setup, and check the connection requirements before upgrading.

Ensure that the firmware version you are upgrading to is compatible with your meter and the version number is greater than your existing firmware.

Back up custom meter webpages

Back up webpage files if they were customized.

NOTICE
<p>LOSS OF CUSTOM WEBPAGES</p> <p>Back up custom webpages before upgrading the meter firmware. The webpages upgrade process overwrites all existing meter webpages.</p> <p>Failure to follow these instructions can result in loss of custom webpage functionality.</p>

To back up meter webpages, copy the **web** folder to a local folder on the computer using an SFTP client application.

Back up custom meter frameworks

Back up the meter template if the meter uses a customized meter template or frameworks.

NOTICE
<p>LOSS OF CUSTOM FRAMEWORKS</p> <p>Back up custom frameworks before upgrading the meter firmware. The upgrade process overwrites existing meter frameworks.</p> <p>Failure to follow these instructions can result in loss of custom framework functionality.</p>

Back up accumulated energy values

Record the accumulated energy values on the meter before upgrading. Re-enter these values after the upgrade.

Download latest ION Setup

To upgrade meter firmware, the most recent version of ION Setup is required.

1. Start ION Setup.
2. Click **Help > About ION Setup** to determine your ION Setup version.
3. Open a web browser and go to https://www.se.com/en/download/document/ION_Setup_Latest_Release/ to locate the latest version of ION Setup.
4. If you do not have the most recently released version, download the installation file, then run it to upgrade ION Setup.

Connection requirements

- Use a direct Ethernet TCP connection to prevent delays and upgrade failure risks associated with slower communications connection methods. You cannot perform certain firmware updates over serial or Ethernet gateway.
- The display, webpages and option module firmware updates require an SFTP over Ethernet connection.
- Use a computer connected to the same Ethernet network as the meter (physically or through a remote desktop connection).
- To upgrade option module firmware, the option module(s) must be connected to the meter.

Upgrading meter firmware

Use individual files such as UPX, BIN and S19 file formats to upgrade or use the firmware upgrade ZIP file with ION Setup (recommended).

Do not interrupt the upgrade process until all updates are complete.

NOTICE
UPGRADE FAILURE Do not interrupt the upgrade process or disconnect the meter or any connected components while ION Setup is performing the firmware upgrades. Failure to follow these instructions can result in loss of meter functionality.

Option 1 (recommended): Upgrading using ZIP file

This is the recommended method of upgrading your meter. This method can also be used for sequential device upgrades.

Any digital and analog outputs associated with your device may change state during a firmware upgrade.

⚠ WARNING
UNINTENDED OPERATION Do not use this device for critical control or protection applications where human or equipment safety relies on the operation of the control circuit. Failure to follow these instructions can result in death, serious injury, or equipment damage.

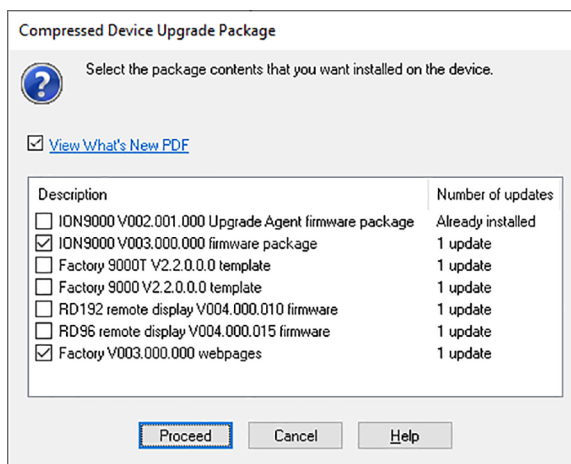
Loading firmware or template onto your meter clears the meter's recorded data.

NOTICE
DATA LOSS Ensure that all important data has been recorded before uploading firmware or a template to your device. Failure to follow these instructions can result in data loss.

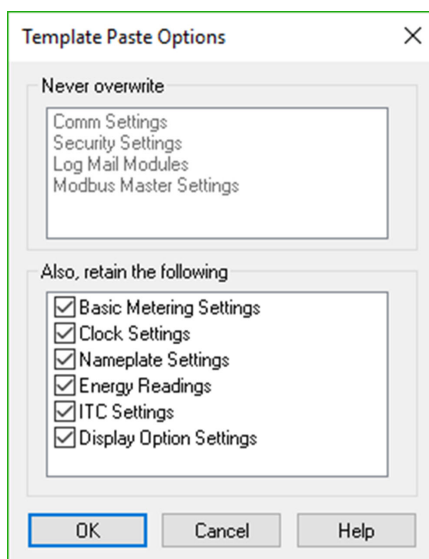
1. Start ION Setup and connect to your meter.
2. Open **Setup Assistant** and navigate to **Template > Upgrade**.
3. Click **Upgrade** and navigate to the saved upgrade ZIP file.
4. Select the upgrade ZIP file and click **Open**. The **Compressed Device Upgrade Package** window displays the updates to be installed in the order listed.

NOTE: Click the **View What's New PDF** link to read about new and updated features related to the firm upgrade.

5. Select the components you want to upgrade. For example:



- **ION9000 firmware V3.0.0 package** to be applied in the order listed:
 - A. UpgradeAgent_V002.001.000.upx (not required if already applied)
 - B. V003.000.000.upx
 - **Factory V2.2.0.0.0 template** is the meter template that is programmed to the meter after the firmware upgrade is complete.
 - **Factory V3.0.0 web pages** are the files to be uploaded to the meter's **web** SFTP folder, to update the meter webpages with firmware-related changes.
6. Select the desired settings and readings to be retained, if you selected a template component:



7. Click **OK**.
8. Click **Proceed** to start the upgrade process. Do not interrupt the process until all the selected components have been upgraded.
9. Confirm upgrade status is complete and upload webpages to the meter. See "Status", page 6 for details.

Option 2: Upgrading using individual upgrade files

Refer to the "Firmware and templates" section in the meter's user manual for detailed instructions on how to upgrade the meter, display and option module firmware.

1. Follow tasks in the order listed:

- a. UpgradeAgent_V002.001.000.upx
- b. V003.000.000.upx

To retain your meter settings, select a meter template file (DCF) to paste into the meter when performing a and b firmware upgrades. Use the **Template Paste Options** box to specify the settings to retain after the upgrade.

<i>NOTICE</i>
LOST SETTINGS
Always select a template file when upgrading the meter firmware.
Failure to follow these instructions can result in loss of meter settings.

2. Confirm upgrade status is complete and upload webpages to the meter. See “Status”, page 6 for details.

Status

After all required meter firmware updates are complete, ION Setup continues to perform the remaining updates.

- If you selected to upgrade the template, ION Setup will paste the template into the meter.
- If you selected to upgrade PM89RD96 remote display firmware, ION Setup will perform the display upgrade through the connected DIN rail-mounted meter.