

RD96 Display firmware upgrade

This document describes the process to upgrade RD96 display firmware for use with ION9000 series meters and PM8000/ION7400 series meters with firmware version v2.1.x or later.

The RD96 display firmware upgrade applies to the following products:

Commercial Reference	Description
METSEPM89RD96	96 x 96 mm remote display
METSEION92030	ION9000 series meter, without display
METSEION92830	ION9000 series meter, without display (China)
METSEPM8243	PM8000 series meter, DIN rail-mount, without display
METSEPM8213	PM8000 series meter, DIN rail-mount, without display, LV DC
METSEION7403	ION7400 series meter, DIN rail mount, without display
METSEION7413	ION7400 series meter, DIN rail mount, without display, LV DC

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Upgrade overview

The ION9000 series meter supports the RD96 remote display. The display firmware must be upgraded to v4.0.x to use with the ION9000 series meters.

Your remote display must be connected to an ION9000 series meter or PM8000/ION7400 series meter with meter firmware v2.1.x or later to perform the display firmware upgrade.

Do not perform this display firmware upgrade if you need to use your RD96 with PM8000 or ION7400 series meters with meter firmware version v1.4.x and earlier.

NOTICE

UNINTENDED DISPLAY OPERATION

The v4.0.x RD96 display firmware upgrade breaks compatibility with meter firmware versions v1.4.x and earlier.

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

Upgrading your display firmware may take up to 15 minutes to complete.

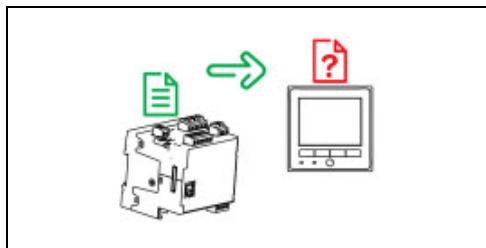
NOTE: If your meter's remote display loses power during the firmware upload, the display will revert to its original firmware and you will have to repeat the display firmware upgrade procedure.

Should I upgrade my display firmware?

The RD96 display firmware upgrade is required under the following conditions:

Display troubleshooting icon

The display icon indicates a display firmware update is required.



Refer to Appendix B: Remote display troubleshooting icons for additional information.

Display firmware version

Displays with firmware version v3.x.x or earlier require a display firmware upgrade for compatibility with your ION9000 series meter, or PM8000/ION7400 series meter with meter firmware v2.1.x or later.

Use ION Setup to determine the display firmware revision.

NOTE: If the RD96 is not compatible with the meter it is connected to, the display serial number and display firmware revision will either be N/A or no data will be provided by ION Setup.

Navigate to **ION Setup > Advanced Meter Mode > Factory module > Setup registers > RMD Revision**.

Prerequisites

Tools and equipment

You can upgrade the RD96 display firmware with ION Setup using an Ethernet connection or by using an FTP client. The recommended upgrade method is Option 1: Upgrade using ION Setup

- Computer with Ethernet connection
- ION Setup (v3.1.x or later)
- FTP access to your meter from the computer running ION Setup
- FTP client such as WinSCP

- Ethernet-connected ION9000, PM8000 or ION7400 series meter
- RD96 display connected to the ION9000, PM8000 or ION7400 series meter

NOTE: The FTP protocol must be enabled on your meter. Refer to the user manual for instructions on enabling the FTP protocol.

RD96 Display firmware upgrade files

Download the RD96 display firmware upgrade files from www.schneider-electric.com

Navigate to **Support > Product Documentation & software downloads**, search for RD96 firmware, and download:

- `rmdupg_rd96_004.000.010.bin`
- `rmdupg_rd96s_001.000.000_patch.bin`

Some RD96 displays may require a two-step firmware upgrade for compatibility with the ION9000 series meter (or PM8000 or ION7400 series meter with meter firmware v2.1.x or later). The RD96 display must be upgraded with the `rmdupg_rd96s_001.000.000_patch.bin` file before proceeding with the `rmdupg_rd96_004.000.010.bin` display firmware upgrade file.

Display firmware upgrade methods

There are two display firmware upgrade methods:

- Option 1: Upgrade using ION Setup
This is the recommended upgrade method.
- Option 2: Upgrade using FTP
Use this option if you do not have ION Setup.

NOTE: The FTP client does not provide display upgrade status. You need to view the display to determine the upgrade status. Refer to Display troubleshooting icons to determine if the upgrade was completed.

You will not need to restart your device after the display firmware upgrade.

Option 1: Upgrade using ION Setup

1. Start ION Setup.
2. Open the Setup Assistant for your meter.
3. Select **Template > Upgrade** tab then click **Upgrade**. Enter your meter's password if prompted and click **OK**.
4. Navigate to where you have stored the display firmware upgrade file and select `Remote Display (.BIN)` as the file type.
5. Select the `rmdupg_rd96_004.000.010.bin` firmware file and click **Open**.
6. Click **Yes** to confirm the firmware upgrade. An ION Setup dialog box displays the upgrade progress.

NOTE: An elapsed timeout is set to 7 minutes.

7. Refer to Upgrade status to confirm the display firmware upgrade was completed.
8. If the display upgrade status indicates Upgrade not completed, your display may need to be upgraded using the Two-step display firmware upgrade method.

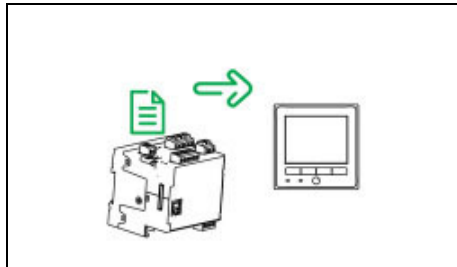
Option 2: Upgrade using FTP

Load updates to your RD96 display firmware using FTP.

1. Launch the FTP client and connect to your meter's internal FTP site.
2. Copy the `rmdupg_rd96_004.000.010.bin` remote display firmware file to the remote display upgrade folder (*rmdUpg*).

NOTE: The file is immediately transferred to the remote display, and is not stored on the meter.

The following troubleshooting icon indicates that the RD96 display firmware upgrade file is being transferred to the display.



3. Wait a minimum of 7 minutes for the RD96 display firmware upgrade to complete.
4. Refer to Upgrade status to confirm the display firmware upgrade was completed.
5. If the display upgrade status indicates Upgrade not completed, your display may need to be upgraded using the Two-step display firmware upgrade method.

Upgrade status

Upgrade completed status

The ION Setup summary screen provides the following information:

- RMD Upgrade Time: <Elapsed RMD upgrade time>
- RMD revision: 004.000.010
- Date and time of the RD96 display firmware upgrade
- Additional upgrade information

The RD96 displays the meter Summary screen when the display firmware upgrade is complete.

Upgrade not completed status

The ION Setup summary screen provides the following information:

- RMD Upgrade Time: 7 minutes and 0 seconds
- RMD revision: N/A
- Unable to validate RMD update
- Date and time of the upgrade
- Additional upgrade information

The RD96 displays an icon indicating incompatibility between your meter and display.

NOTE: The RD96 troubleshooting icon displayed may vary. See Appendix B: Display troubleshooting icons for more information.

Technical support

Contact Technical Support for further assistance

Appendix A: Two-step display firmware upgrade methods

Perform a two-step display firmware upgrade if Option 1 or 2 indicates Upgrade not completed.

Two-step upgrade using ION Setup

1. Start ION Setup.
2. Open the Setup Assistant for your meter.
3. Select **Template > Upgrade** tab then click **Upgrade**. Enter your meter's password if prompted and click **OK**.
4. Navigate to where you have stored the display firmware upgrade file and select `Remote Display (.BIN)` as the file type.
5. Select the `rmdupg_rd96s_001.000.000_patch.bin` firmware file and click **Open**.
6. Click **Yes** to confirm the firmware upgrade. An ION Setup dialog box displays the upgrade progress.

NOTE: An elapsed timeout is set to 7 minutes.

An ION Setup summary screen is displayed when the RD96 display `rmdupg_rd96s_001.000.000_patch.bin` upgrade is complete.

7. Click **Exit**.
8. Repeat steps 4 through 7 using the `rmdupg_rd96_004.000.010.bin` upgrade file.

NOTE: An elapsed timeout is set to 7 minutes.

9. Refer to Upgrade status to confirm the display firmware upgrade was completed.

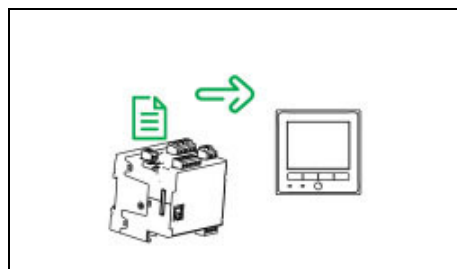
Contact Technical Support if the display upgrade status indicates Upgrade not completed.

Two-step upgrade using FTP

1. Launch the FTP client and connect to your meter's internal FTP site.
2. Copy the `rmdupg_rd96s_001.000.000_patch.bin` remote display firmware file to the remote display upgrade folder (`rmDupg`).

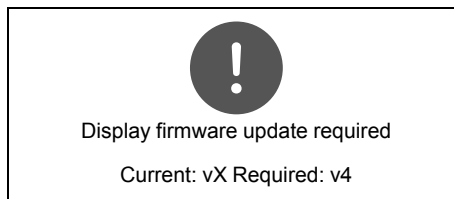
NOTE: The file is immediately transferred to the remote display, and is not stored on the meter.

The following troubleshooting icon indicates that the RD96 display firmware upgrade file is being transferred to the display:



3. Wait a minimum of 7 minutes for the RD96 display firmware upgrade to complete.

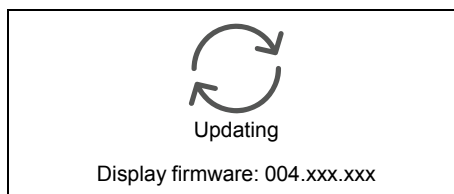
The following troubleshooting icon indicates that the `rmdupg_rd96_004.000.010.bin` remote display firmware file can be uploaded:



4. Copy the `rmdupg_rd96_004.000.010.bin` remote display firmware file into the remote display upgrade folder (*rmdUpg*).

NOTE: The file is immediately transferred to the remote display, and is not stored on the meter.

The following troubleshooting icon indicates that the RD96 display firmware upgrade file is being transferred to the display:



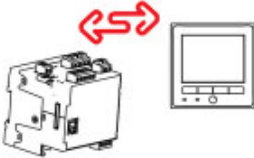
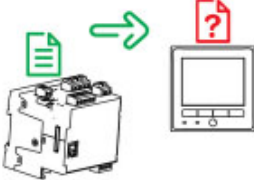
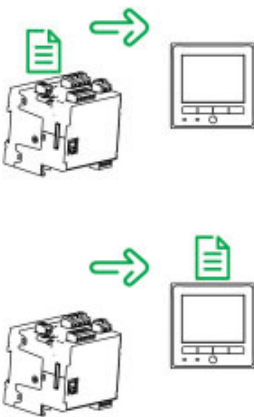
5. Wait a maximum of 7 minutes for the RD96 display firmware upgrade to complete.
6. Refer to Upgrade status to confirm the display firmware upgrade was completed.

Contact Technical Support if the RD96 display upgrade status indicates Upgrade not completed.






Appendix B: Display troubleshooting icons

Use the display troubleshooting icons to determine the display connection status with the meter.

Remote display firmware v3.2.x (or earlier) icons

Icon	Display status
	<p>Remote display cannot communicate with your meter. Check the connection between your meter and the display. Check the meter's status LED to confirm that the meter is operating normally.</p>
	<p>Remote display needs updated firmware for compatibility with your meter.</p>
	<p>Remote display is undergoing a firmware upgrade. Do not disconnect your remote display from your meter.</p>

Remote display firmware v4.0.x icons

Icon	Display status
 <p>Connecting</p>	Remote display is connecting to your meter.
 <p>Error</p>	Remote display cannot communicate with your meter. Check the connection between your meter and the display. Check the meter's status LED to confirm that the meter is operating normally.
 <p>Display firmware update required Current: vX Required: v4</p>	Remote display needs updated firmware for compatibility with your meter. NOTE: vX is used here to illustrate the current remote display firmware version.
 <p>Updating</p>	Remote display is downloading a firmware upgrade. Do not disconnect your remote display from your meter.
 <p>Updating Display firmware: 004.xxx.xxx</p>	Remote display is undergoing a firmware upgrade. Do not disconnect your remote display from your meter.