

Metrohm IC Driver 2.2 for Empower™

Installation Manual

8.0102.8011EN / v5 / 2026-01-15



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Installation Manual

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1 Minimum system requirements

Refer to the Empower™ software documentation for information regarding the technical requirements for your computer.

Application software Empower™ 3 software

Operating system All Service Packs or current updates must be installed.

Feature Release 4

- 64-bit version of Windows 7
- 64-bit version of Windows 10
- Windows Server 2012 R2

Feature Release 5

- 64-bit version of Windows 10
- Windows Server 2016

Empower™ 3.6.0

- 64-bit version of Windows 10
- Windows Server 2016

Empower™ 3.6.1

- 64-bit version of Windows 10
- Windows Server 2016

Empower™ 3.7.0

- 64-bit version of Windows 10
- 64-bit version of Windows 11
- Windows Server 2019

Empower™ 3.8.0.1

- 64-bit version of Windows 10
- 64-bit version of Windows 11
- Windows Server 2019

Empower™ 3.8.1

- 64-bit version of Windows 10
- 64-bit version of Windows 11
- Windows Server 2019

Empower™ 3.9.0

- Windows 10 Professional or Enterprise, 64-bit version 22H2
- Windows 11 Professional or Enterprise, version 24H2
- Windows Server 2019



- Windows Server 2022

Empower™ 3.10.0

- Windows 10 Professional or Enterprise, 64-bit version 22H2
- Windows 11 Professional or Enterprise, version 24H2
- Windows Server 2019
- Windows Server 2022

.NET Framework

64-bit version of Microsoft .NET Framework 4.7.1 or higher

Instruments supported

The Metrohm IC Driver 2.2 for Empower™ supports the following instruments:

- **850 Professional IC**
(version: 2.850.1010, 2.850.2010, 2.850.2030)
- **881 Compact IC pro**
(version: 2.881.0010, 2.881.0020, 2.881.0030)
- **930 Compact IC Flex**
(version: 2.930.1100, 2.930.1160, 2.930.1200, 2.930.1260, 2.930.1300, 2.930.1360, 2.930.1400, 2.930.1460, 2.930.1500, 2.930.1560, 2.930.2100, 2.930.2160, 2.930.2200, 2.930.2260, 2.930.2300, 2.930.2360, 2.930.2400, 2.930.2460, 2.930.2500, 2.930.2560)
- **940 Professional IC Vario**
(version: 2.940.1100, 2.940.1110, 2.940.1140, 2.940.1200, 2.940.1300, 2.940.1400, 2.940.1410, 2.940.1440, 2.940.1500, 2.940.1510, 2.940.1540, 2.940.2100, 2.940.2400, 2.940.2500)
- **942 Extension Module Vario**
(version: 2.942.0040, 2.942.1060, 2.942.0500)
- **858 Professional Sample Processor**
(version: 2.858.0010, 2.858.0020)
with Liquid Handling Station (6.5330.130)
with Magnetic Stirrer (2.741.0010)
- **889 IC Sample Center**
(version: 2.889.0010, 2.889.0020)
- **919 IC Autosampler plus**
(version: 2.919.0020)
- **945 Professional Detector Vario**
(version: 2.945.0010, 2.945.0020 , 2.945.0030)
- **800 Dosino**
(version: 2.800.0010)
Can only be operated in combination with an IC instrument.
- **Remote Box MSB**
(version: 6.2148.010)
Can only be operated in combination with an IC instrument.
- **944 Professional UV/VIS Detector**
(version: 2.944.0010)

- **947 Professional UV/VIS Detector**
(version: 2.947.0010, 2.947.0020)
- **941 Eluent Production Module**
(version: 2.941.0010)
- **IC Amperometric Detector**
(version: 2.850.9110)
Can only be operated in combination with an IC instrument.
- **IC Conductivity Detector**
(version: 2.850.9010)
Can only be operated in combination with an IC instrument.
- **IC Conductivity Detector MB**
(version: 2.850.9020)
Can only be operated in combination with an IC instrument.

Limitations

1 DHCP configuration may maximally include the following modules:

- 1 sample changer (889 IC Sample Center or 858 Professional Sample Processor or 919 IC Autosampler plus)
- 1 945 Professional Detector Vario
- 1 Professional UV/VIS Detector (944 Professional UV/VIS Detector Vario or 947 Professional UV/VIS Detector Vario)
- 1 941 Eluent Production Module
- The number of MSB instruments (e.g. Dosinos) depends on the number of available ports (according to the system configuration).
- 1 IC instrument (930 Compact IC Flex or 940 Professional IC Vario)



NOTE

A high number of connections may downgrade the performance and cause problems in slow systems.

This also applies for systems which are powered down but configured in Empower™.



NOTE

One License for the Metrohm IC Driver 2.2 for Empower™ per computer is required.

Firmware requirements

- 850/881 instruments: version 5.850.0109 or higher
- 858 instruments: version 5.858.0010 or higher
- 930/940/942 instruments: version 5.940.0100 or higher
- 889 instruments: version 0840.100-1.30 or higher
- 944 instruments: version 5.887.0013 or higher
- 941 instruments: version 5.846.0022 or higher

- 945 instruments: version 5.940.0100 or higher
- 919 instruments: 5.858.0012 or higher
- 947 instruments: 5.947.0101 or higher



NOTE

Firmware updates have to be executed by your regional Metrohm service representative.

2 Preconditions

Empower™ installation

Empower™ must be installed according to the Waters instructions.

Administrator rights

The user must have administrator rights to be able to install the software.

Energy settings



CAUTION

Data loss may occur if the computer switches to standby mode during a determination. Therefore, you should **disable** the **standby mode** in the energy settings of the operating system and for USB.

3 Installation



NOTE

The installation procedure differs whether you install the Metrohm IC Driver for Empower™ for the first time or you perform an upgrade from version 2.1.

- Upgrade: *See chapter 3.1, page 6.*
- Base installation: *See chapter 3.2, page 8.*



NOTE

Regulated operation (FDA)

In regulated operation, the current installation needs to be checked with the "Database Installation Verification Utility" and the "Waters File Verification Utility" in the start menu folder of Empower™ before installing the Metrohm IC Driver 2.2 for Empower™. Hereby a report is created that shows all the changes in the software Empower™.

Start ► All Programs ► Empower ► Verify Files

3.1 Upgrade installation

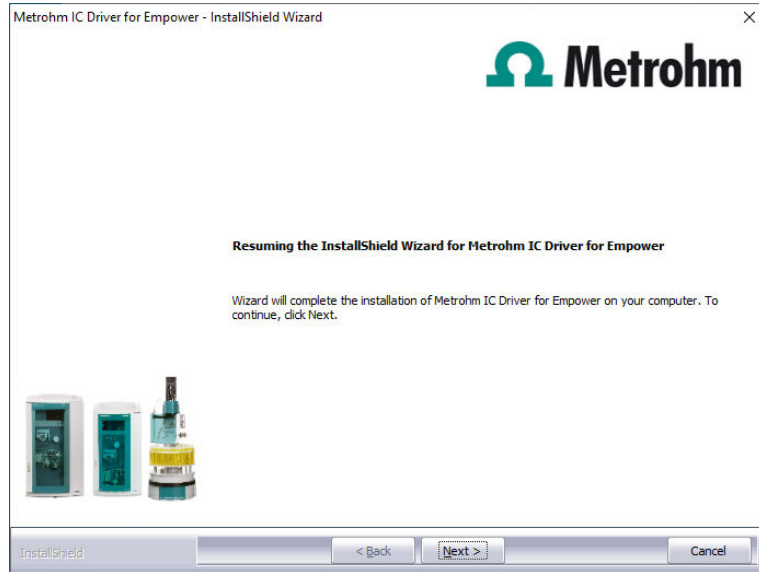
If you operate several systems, use a separate computer for the Metrohm IC system. Metrohm recommends this in order to avoid that other systems are affected by a restart.

1 Stop **Run Samples**, **Browse projects** and **Processing Server**.

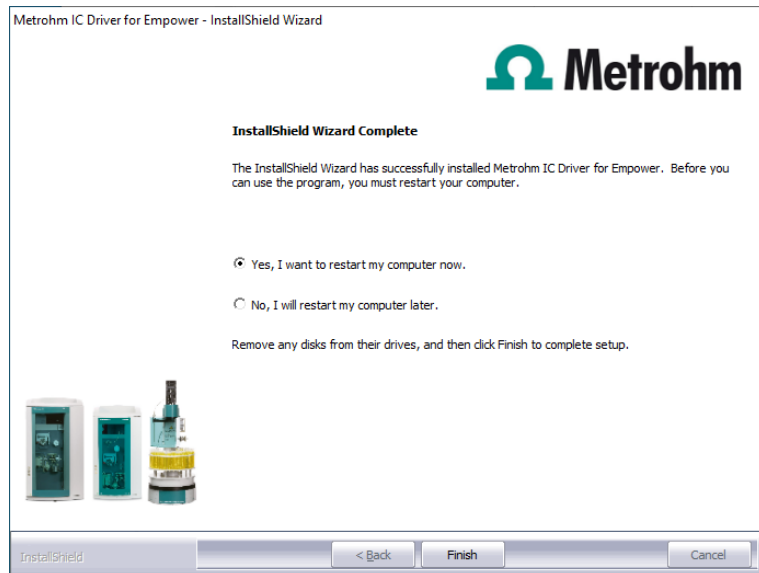
Switch off all instruments and close Empower™.

2 Navigate to the installation medium. Double-click on the file **setup.exe**.

3 The installation wizard appears. Click on **[Next]** to install the software.



4 On the appearing screen, select **Yes, I want to restart my computer now**. Click on **[Finish]**.



At the end of the installation, the file **Empower.log** is created. This file contains all relevant information concerning your current Empower™ installation. Save this file on your hard drive for future reference and print it (add to IQ).

All necessary drivers have been installed.

The installation includes a **setup.iss** file. Use this file to distribute the Metrohm IC Driver for Empower™ to several computers in a network. To start silent installation, enter the following command



in the command prompt: `<full path to setup.exe>\setup.exe" -s -f1"<fullpath to setup.iss>\setup.iss`

- 5 Restart your computer.
- 6 In regulated operation, start the program **Database Installation Verification Utility** in the start menu.

Start ► All Programs ► Empower ► verify files

The result list shows all changes to the current Empower™ installation. Usually the Metrohm IC Driver for Empower™ does not cause any changes in Empower™.

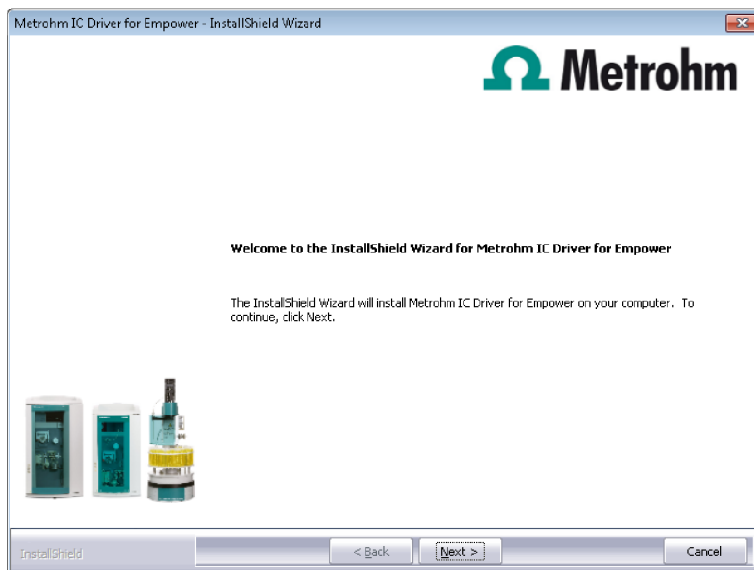
When using a special sample rack, the adjusted rack data is saved in the file „RackCodeMapping.html“. When performing the „verify files“ function, this file is shown as changed.

Print the list with the record of changes and add to the IQ documents.

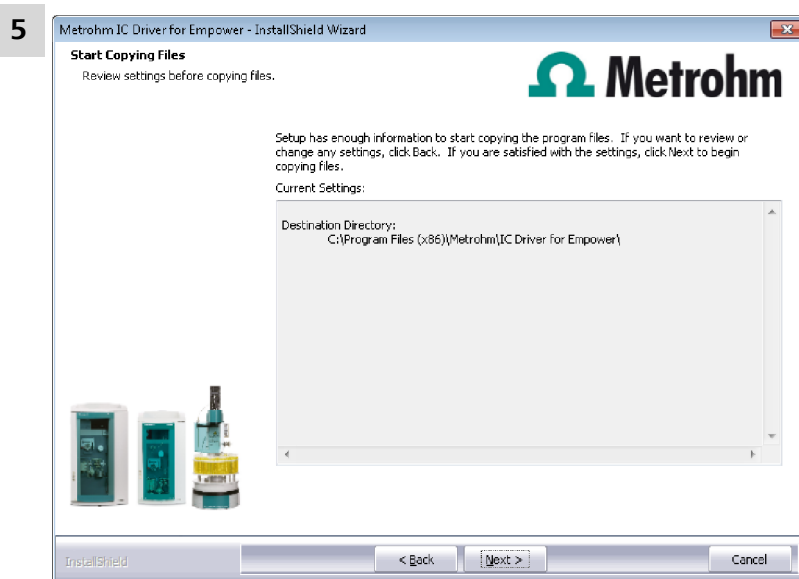
3.2 Base installation

If you operate several systems, use a separate computer for the Metrohm IC system. We recommend this in order to avoid that other systems are affected by a restart.

- 1 Prior to the installation, switch off all modules.
- 2 The installation process starts automatically when you insert the installation medium. If this option is disabled on your computer, double-click on the file **setup.exe**.
- 3 During the installation process, the Welcome screen appears first. Click on **[Next]** to install the software.

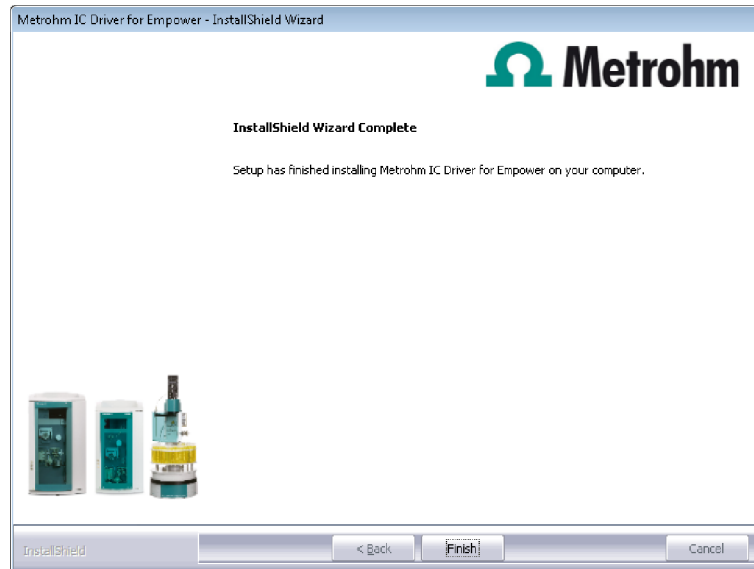


- 4 Now confirm the target folder for the **Metrohm IC Driver for Empower™** installation with **[Next]** or select a different target folder with **[Browse...]**.



Click on **[Next]**.

- 6 Wait for the installation to complete.
- 7 Click on **[Finish]**.



At the end of the installation, the file **Empower.log** is created. This file contains all relevant information concerning your current Empower™ installation. Save this file on your hard drive for future reference and print it (add to IQ).

All necessary drivers have been installed.

The installation includes a **setup.iss** file. Use this file to distribute the Metrohm IC Driver for Empower™ to several computers in a network. To start silent installation, enter the following command in the command prompt: `<full path to setup.exe>\setup.exe" -s -f1 "<fullpath to setup.iss>\setup.iss`

- 8** If you are asked to restart your computer, shut down your computer and restart it again.
- 9** In regulated operation, start the program **Database Installation Verification Utility** in the start menu.

Start ► All Programs ► Empower ► verify files

The result list shows all changes to the current Empower™ installation. Usually the Metrohm IC Driver for Empower™ does not cause any changes in Empower™.

When using a special sample rack, the adjusted rack data is saved in the file „RackCodeMapping.html“. When performing the „verify files“ function, this file is shown as changed.

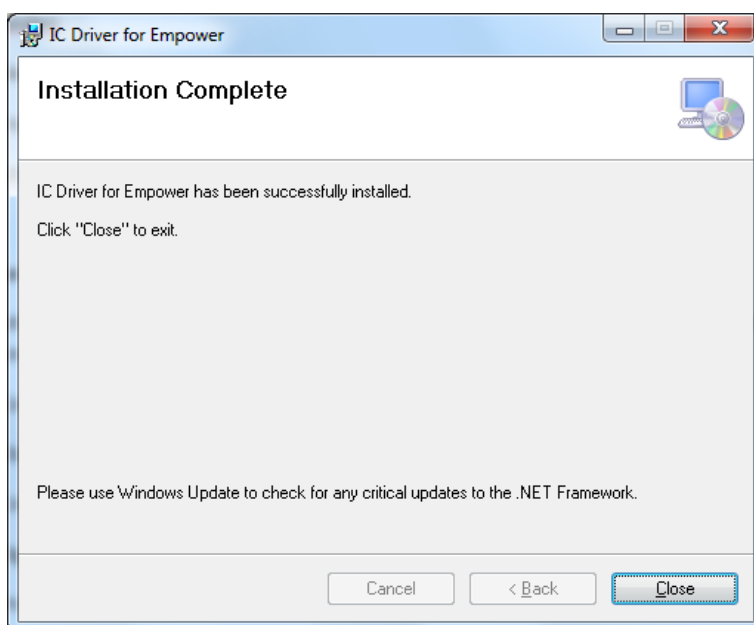
Print the list with the record of changes and add to the IQ documents.

3.3 Installation in a Citrix environment

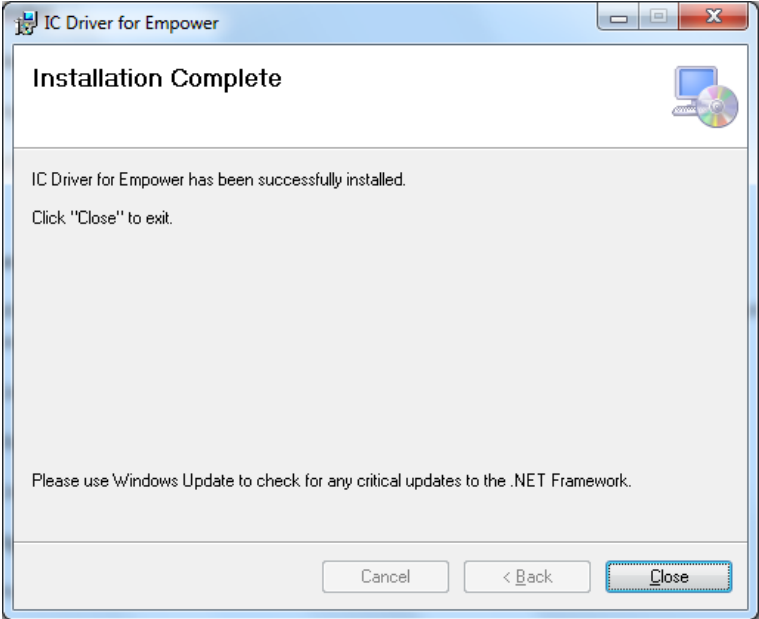
To install the **Metrohm IC Driver 2.2 for Empower™** in a Citrix environment, the following preconditions must be met:

- Empower™ must be installed according to the Waters instructions.
- Empower™ must be configured in a Citrix XenApp Server environment. For the required Citrix XenApp version and minimum system requirements, refer to the Waters instructions.

- 1 Install the Metrohm IC Driver 2.2 for Empower™ on the Citrix Server. Follow the instructions given in *chapter 3.2, page 8*.



- 2 Install the Metrohm IC Driver 2.2 for Empower™ on every client (LAC/E or computer) to which a Metrohm IC instrument is connected. Follow the instructions given in *chapter 3.2, page 8*.



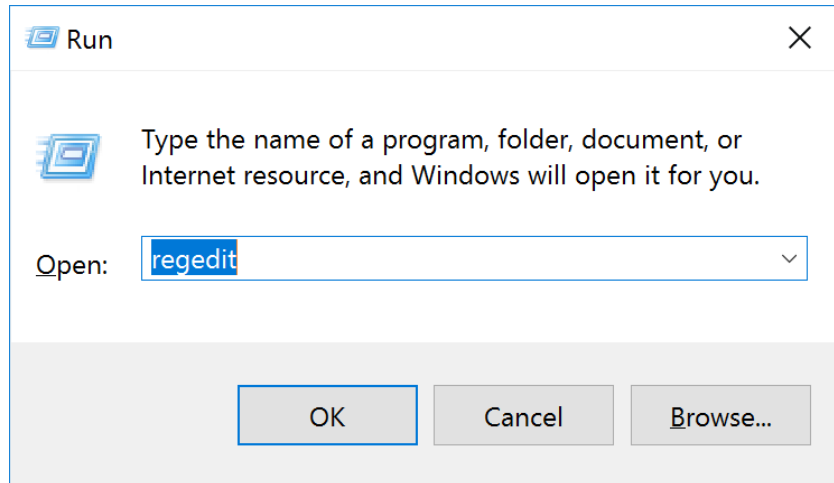
4 Uninstalling

- 1 Close the **Run Samples** window.
- 2 In order to uninstall the **Metrohm IC Driver 2.2 for Empower™**, start the file **setup.exe** on the installation medium or go to **Control Panel ► Programs and Features**
- 3 Click on **Metrohm IC Driver for Empower™**.
- 4 Select **Change/Remove**.

5 Downgrading from Metrohm IC Driver 2.2 to previous versions

Besides uninstalling the Metrohm IC Driver 2.2 for Empower™ and installing Metrohm IC Driver 2.1 for Empower™ or Metrohm IC Driver 2.0 for Empower™, it is necessary to uninstall drivers and delete some registry keys manually.

- 1 Close the **Run Samples** window.
- 2 End the process **InstrumentServer.exe** via the Windows Task Manager. Open the Windows Task Manager with **[Ctrl + Alt + Delete]**.
- 3 Uninstall the Metrohm IC Driver for Empower™ (*see chapter 4, page 13*).
- 4 Open the Windows start menu.
Search for **Apps & Features**.
Execute **Apps & Features**.
- 5 Search for **Metrohm OEM USB Serial Converter Driver Setup v2.12.28.0**.
Click on **[Deinstall]**.
In the appearing dialog, confirm with **[Deinstall]**.
- 6 If an 889 IC Sample Center was controlled with the computer, search for **Metrohm USB Driver Setup v3.12.0.0**.
Click on **[Deinstall]**.
In the appearing dialog, confirm with **[Deinstall]**.
- 7 Restart the computer.
- 8 Check whether the file folder **C:\Program Files (x86)\Metrohm\IC Driver for Empower** exists. If the file folder exists, delete it.
- 9 Open the **Run** dialog. Therefore press **Windows logo key + R**.



Type **regedit** in the text box.

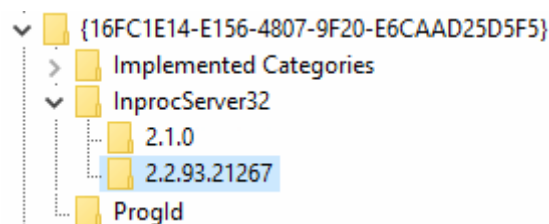
Click on **[OK]**.

- 10** Check whether keys higher than 2.1.0 are present in the following folders:

- HKEY_CLASSES_ROOT\Wow6432Node\CLSID\{4F8B6669-3A56-491D-B6B6-6E4B8064BCBD}\InprocServer32
- HKEY_CLASSES_ROOT\Wow6432Node\CLSID\{DA0745A9-7FB2-4F39-85E0-7DD12905E449}\InprocServer32
- HKEY_CLASSES_ROOT\Wow6432Node\CLSID\{16FC1E14-E156-4807-9F20-E6CAAD25D5F5}\InprocServer32
- HKEY_CLASSES_ROOT\Metrohm.IC.StatusPanel
- HKEY_CLASSES_ROOT\Metrohm.OIP.Control
- HKEY_CLASSES_ROOT\Metrohm.OIP.MethodEditor

If present, delete the keys with right-click, click **delete**.

Example:



- 11** Install the Metrohm IC Driver 2.1 for Empower™ or the Metrohm IC Driver 2.0 for Empower™.

For further information, refer to the respective installation guide (8.0102.8001EN for Metrohm IC Driver 2.1 for Empower™ or 8.102.8068 for Metrohm IC Driver 2.0 for Empower™).