SEW EURODRIVE

Installation Instructions

MOVISUITE® Engineering Software
MOVISUITE® compact, MOVISUITE® standard

Table of Contents

1 General information

1.1 About this documentation

This documentation is an integral part of the product. The documentation is intended for all employees who perform work on the product.

Make sure that this documentation is accessible and legible. Ensure that persons responsible for the systems and their operation as well as persons who work with the product independently have read through the documentation carefully and understood it. If you are unclear about any of the information in this documentation, or if you require further information, contact SEW-EURODRIVE.

1.2 Content of the documentation

The descriptions in this documentation refer to the software and firmware versions at the time of publication. These descriptions might differ if you install later software or firmware versions. In this case, contact SEW-EURODRIVE.

The latest edition of the documentation is also always available in Online Support on the website of SEW-EURODRIVE.

1.3 Decimal separator in numerical values

In this document, a period is used to indicate the decimal separator.

Example: 30.5 kg

1.4 Product names and trademarks

The product names mentioned in this documentation are trademarks or registered trademarks of the respective titleholders.

1.5 Copyright notice

2 Safety notes

2.1 Preliminary information

The following general safety notes serve the purpose of preventing injury to persons and damage to property. They primarily apply to the use of products described in this documentation. If you use additional components, also observe the relevant warning and safety notes.

2.2 Target group

Specialist for working with software

Any work with the software may only be performed by a specialist with suitable training. A specialist in the context of this documentation is someone who has the following qualifications:

*   Appropriate instruction

*   Knowledge of this documentation and other applicable documentation

*   SEW-EURODRIVE recommends additional training for products that are operated using this software.

2.3 Designated use

MOVISUITE® is the engineering software for all hardware components and software components of the MOVI-C® modular automation system.

Use the device-independent MOVISUITE® engineering software to start up and configure the axes and to download the complete configuration to a MOVI-C® CONTROLLER.

Observe the documentation for the components used.

Unintended or improper use of the product may result in severe injury to persons and damage to property.

2.4 Network security and access protection

A bus system makes it possible to adapt electronic drive technology components to the particulars of the machinery within wide limits. There is a risk that a change of parameters that cannot be detected externally may result in unexpected but not uncontrolled system behavior and may have a negative impact on operational safety, system availability, or data security.

Ensure that unauthorized access is prevented, especially with respect to Ethernet-based networked systems and engineering interfaces.

Use IT-specific safety standards to increase access protection to the ports. For a port overview, refer to the respective technical data of the device in use.

3 About MOVISUITE®

MOVISUITE® is the engineering software and operating platform for all hardware and software components of the MOVI-C® modular automation system. The engineering software enables configuration, parameterization, and startup of the application via an intuitive user interface.

Overview of functions:

- Project management and project planning
- Startup of hardware and software components
- Parameterization and programming of MOVIKIT® software modules
- Diagnostics of hardware and software modules
- Central data storage

3.1 Requirements

Before installing or updating MOVISUITE®, observe the following:

- Only one MOVISUITE® software can be installed per PC.
- Note that there are **separate** data updates for MOVISUITE® standard and MOVISUITE® compact. Always use the data update that is appropriate for your variant (→ 🖺 7) when performing an update.
- You must have administrator rights for your PC.
- Read the latest release notes before updating an existing installation of MOVISUITE®.

3.2 Upgrades

Both MOVISUITE® standard V2.31 or later and MOVISUITE® compact V2.31 or later can be upgraded through the installation files to a newer version of MOVISUITE® compact. To install an older version of MOVISUITE® standard you have to uninstall MOVISUITE® compact.

Example: To install MOVISUITE® standard V2.20 with MOVISUITE® compact V2.31 installed, you must first remove MOVISUITE® compact V2.31.

SEW
EURODRIVE

3.3   Variants

MOVISUITE® is available in the variants MOVISUITE® standard and, since version 2.31, as MOVISUITE® compact. The two variants differ in the system requirements and the scope of functions.

INFORMATION

i

• Projects can be exchanged between the variants. Devices that are not supported are marked with a question mark and cannot be edited.

• MOVISUITE® compact cannot be used for editing projects that contain MOVI-C® CONTROLLER or MOVI-C® FIELD CONTROLLER. If you edit projects that contain MOVI-C® CONTROLLER or MOVI-C® FIELD CONTROLLER, install MOVISUITE® standard.

• It is not possible to install MOVISUITE® compact and MOVISUITE® standard together.

3.3.1   MOVISUITE® compact

MOVISUITE® compact does not support MOVI-C® CONTROLLER and MOVI-C® FIELD CONTROLLER. The following components are not included:

• MOVIKIT® software modules for MOVI-C® CONTROLLER

• Device modules for MOVI-C® CONTROLLER

• IEC Editor

This allows for a significantly reduced installation time and a reduced need for hard disk space.

MOVISUITE® compact is the ideal variant for the following tasks:

• Startup, operation, optimization, and diagnostics of control cabinet inverters and decentralized drive technology

• Using MOVIKIT® software modules of the "Drive" category

3.3.2 MOVISUITE® standard

Since version 1.1, MOVISUITE® standard allows for engineering of all hardware and software components of the MOVI-C® modular automation system, including the MOVI-C® CONTROLLER and the MOVI-C® FIELD CONTROLLER. Compared to MOVISUITE® compact, MOVISUITE® standard contains the following components:

- MOVIKIT® software modules for MOVI-C® CONTROLLER
- Device modules for MOVI-C® CONTROLLER
- IEC Editor

MOVISUITE® standard is the ideal variant for the following tasks:

- Startup, optimization, and diagnostics of MOVI-C® CONTROLLER and MOVI-C® FIELD CONTROLLER, control cabinet inverters and decentralized drive technology
- Engineering of fully automated systems and machines with visualizations
- Using all MOVIKIT® software modules of the → "MOVI-C® Software Components" catalog

3.4 Versions

You may only make changes to components from the MOVI-C® modular automation system using the appropriate version of MOVISUITE®.

For an overview of versions of MOVI-C® components for MOVISUITE® versions, refer to the latest release notes.

SEW EURODRIVE

3.5 Software packages

MOVISUITE® distinguishes between main version, service pack, and data update software packages.

Software package	Contains, for example
Main version (version XX.YY.**0**)	• New version with additional functions • Optimization of existing functions • Bug fixes • Support of new hardware and software components
Service pack (version XX.YY.**10Z**[1])	• New version with bug fixes A service pack contains the main version of the same version as well as all data updates published since the publication of this main version and any further bug fixes. Data updates published after the service pack must additionally be installed. When installing a service pack, no prior installation of the corresponding main version is required. Example: Content of MOVISUITE® V2.31.100 service pack 1: • MOVISUITE® V2.31.0 main version • MOVISUITE® V2.31.1 data update • Correction of the error "Downloading the drive train with CSA31A and linear encoder 3 not possible"
Data update[2] (version XX.YY.**Z**[1])	• Support of new hardware and software components • Updates for hardware and software components A data update does not contain any new or optimized functions.

1) Z = 0 – 9
2) Former designation "Update package"

4 System requirements

The system requirements apply to both MOVISUITE® compact and MOVISUITE® standard.

- Processor

  1 GHz 32-bit processor (x86) or 64-bit processor

- RAM

  4 GB RAM, recommended are 8 GB RAM

- Operating system hard disk space

  The memory requirements depend on the version. For information on the memory requirements, refer to the system requirements of the respective version in → Online Support.

- Graphics card

  2 GB graphics memory

- Resolution

  The default resolution is full HD resolution. A good display is achieved with a resolution of 1280 × 800 and more.

- Operating system

  MOVISUITE® is a 32-bit application. The following operating system variants are permitted:

  – Windows 10 32 bit/64 bit version 1809 or later

  – Windows 11

- Redistributables

  The following Microsoft components must also be installed:

  – Microsoft Windows Installer 3.1 or higher

  – Microsoft .NET Framework 4.7.2

  – For MOVISUITE® standard: Microsoft WebView2 Runtime, 32 bit/64 bit (depending on the operating system), at least V92.0.902.67 "Microsoft WebView2 Runtime" (→ 🖹 10)

4.1 Microsoft WebView2 Runtime

INFORMATION

ℹ️

If the corresponding PC does not have an Internet connection, download the program and install it before installing MOVISUITE® standard.

If you use the IEC Editor of MOVISUITE® standard, the web browser "Microsoft Edge WebView2" embedded in the IEC Editor sends information about visited websites and downloaded files to Microsoft as part of the "Microsoft Defender SmartScreen" function to examine them for vulnerabilities.

SEW EURODRIVE

5 Firewall rules

If you use a firewall other than Windows, make sure the following programs are enabled in your firewall.

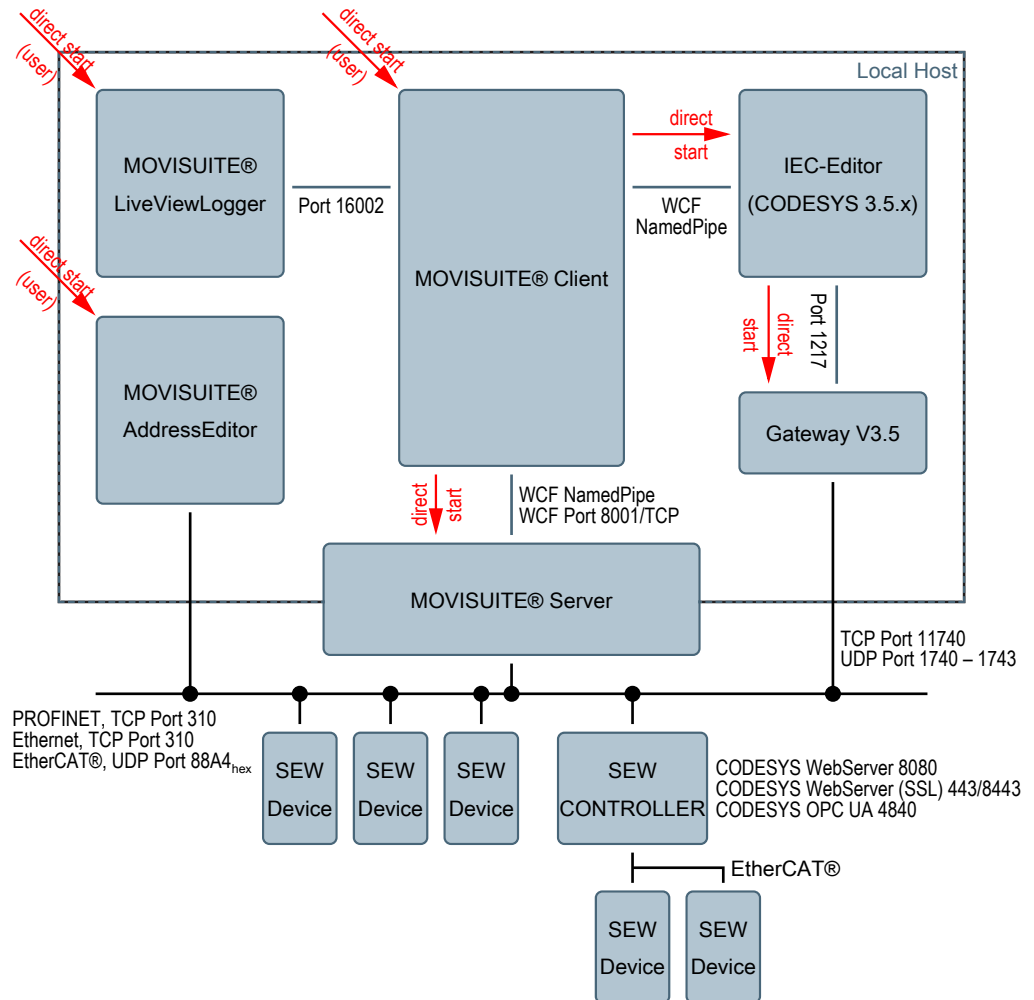## 5.1 MOVISUITE® compact

Program	Protocols	Ports
SEW.CS2.Client.exe	–	310
SEW.CS2.Server.Communication Controller.Starter.exe (for versions lower than V2.10.x.x)		8001
		$88A4_{hex}$
SEW.CS2.Server.ProTon.Starter.exe		
SEW.CS2.Server.ServerFramework.exe		
SEW.CS2.AddressEditor.exe	Proprietary protocol	–
SEW.CS2.LiveViewLogger.exe	TCP	16002

5.2 MOVISUITE® standard

Program	Protocols	Ports
SEW.CS2.Client.exe	–	310
SEW.CS2.Server.Communication Controller.Starter.exe (for versions lower than V2.10.x.x)		8001
		$88A4_{hex}$
SEW.CS2.Server.ProTon.Starter.exe		
SEW.CS2.Server.ServerFramework.exe		
SEW.CS2.AddressEditor.exe	Proprietary protocol	–
SEW.CS2.LiveViewLogger.exe	TCP	16002
CODESYS.exe	TCP UDP	11740
GatewaySysTray.exe		1740 – 1743
GatewayService.exe		1217
CODESYSHMI.exe		
Remote maintenance FTP	TCP	21
Remote maintenance telnet	TCP	23

6 Communication stations and ports

MOVISUITE®
LiveViewLogger — Port 16002

direct start (user)

MOVISUITE®
AddressEditor

direct start (user)

MOVISUITE® Client

direct start

WCF NamedPipe

IEC-Editor
(CODESYS 3.5.x)

direct start — Port 1217

Gateway V3.5

direct start
WCF NamedPipe
WCF Port 8001/TCP

MOVISUITE® Server

Local Host

TCP Port 11740
UDP Port 1740 – 1743

PROFINET, TCP Port 310
Ethernet, TCP Port 310
EtherCAT®, UDP Port $88A4_{hex}$

SEW Device

SEW Device

SEW Device

SEW CONTROLLER

CODESYS WebServer 8080
CODESYS WebServer (SSL) 443/8443
CODESYS OPC UA 4840

EtherCAT®

SEW Device

SEW Device

9007237543786123

7 Installation

7.1 MOVISUITE® compact

INFORMATION

- The installation of the latest version of MOVISUITE® compact takes about 15 minutes.
- If an existing MOVISUITE® standard installation is uninstalled during the installation of MOVISUITE® compact, the installation wizard can remain at 3% installation progress for up to 2 hours. Do not cancel the installation in this case.
- In rare cases, virus scanners or firewalls can cause problems when installing MOVISUITE® compact. Check the firewall rules (→ 🖹 11) and the log files of the virus scanner and the firewall.

✓ Copy the following installation files to the hard disk of your PC: movisuiteCompact.syspkg, MOVISUITE-Licence.txt, MovisuiteSetup.exe.

1. If the installation files are available on a write protected medium (e.g. on a DVD), then remove the write protection from all 3 installation files. To do so, open the context menu with the right mouse button, open the properties of the files and uncheck the "Read only" check box on the "Attributes" tab.

2. Run the "MovisuiteSetup.exe" installation file.

   ⇨ The software is installed using a wizard.

   ⇨ The wizard informs you if a restart is required and whether you have to run the installation file again afterwards.

3. If the wizard prompts you to restart the computer, perform the restart.

4. If the wizard informs you that the installation must be performed again after the computer has been restarted, run the "MovisuiteSetup.exe" installation file.

⇨ MOVISUITE® compact has been installed.

7.2   MOVISUITE® standard

i

INFORMATION

- The installation of the latest version of MOVISUITE® standard can take more than 1.5 hours.

- In rare cases, virus scanners or firewalls can cause problems when installing MOVISUITE® standard. Check the firewall rules (→ 🖺 11) and the log files of the virus scanner and the firewall.

✓ If you have installed MOVISUITE® standard on your PC and you have worked with MOVISUITE® standard or the IEC Editor after having started your PC last time, then restart your PC.

✓ Copy the following installation files to the hard disk of your PC: movisuiteStandard.syspkg, MOVISUITE-Licence.txt, MovisuiteSetup.exe.

1. If the installation files are available on a write protected medium (e.g. on a DVD), then remove the write protection from all 3 installation files. To do so, open the context menu with the right mouse button, open the properties of the files and un-check the "Read only" check box on the "Attributes" tab.

2. Run the "MovisuiteSetup.exe" installation file.

  ⇨ The software is installed using a wizard.

  ⇨ The wizard informs you if a restart is required and whether you have to run the installation file again afterwards.

3. If the wizard prompts you to restart the computer, perform the restart.

4. If the wizard informs you that the installation must be performed again after the computer has been restarted, run the "MovisuiteSetup.exe" installation file.

⇨ MOVISUITE® standard has been installed.

SEW
EURODRIVE

8 Silent installation and uninstallation

8.1 MOVISUITE® standard

The setup of MOVISUITE® standard allows for silent installation and uninstallation, which means that installation and uninstallation is unattended. This allows for automating the installation to distribute and manage MOVISUITE® standard across a large number of systems within companies. Following an overview of associated command line parameters and return values.

Parameter

-u	Uninstalls MOVISUITE® standard with all modules except for the IEC Editor.
-p"*target folder*"	Installs MOVISUITE® standard in the *target folder*. The default is "C:\Program Files (x86)\SEW\MOVISUITE standard"
-qn	Disables the graphical user interface during installation or uninstallation.

Examples

- Silent installation into the target folder "C:\MOVISUITE":

  ```
  MovisuiteSetup.exe -p"C:\MOVISUITE"
  ```
- Silent installation into the target folder "C:\Program Files (x86)\SEW\MOVISUITE standard" without graphical user interface:

  ```
  MovisuiteSetup.exe -qn
  ```
- Silent uninstallation without graphical user interface:

  ```
  MovisuiteSetup.exe -u -qn
  ```

Return values

See chapter "Return values" (→ 🖺 16)

8.2 MOVISUITE® compact

The setup of MOVISUITE® compact allows for silent installation and uninstallation, which means the installation and uninstallation is unattended. This allows for automating the installation to distribute and manage MOVISUITE® compact across a large number of systems within companies. Following an overview of associated command line parameters and return values.

Parameter

-u	Uninstalls MOVISUITE® compact and all its modules.
-p"*target folder*"	Installs MOVISUITE® compact in the *target folder*. The default is "C:\Program Files (x86)\SEW\MOVISUITE compact"
-qn	Disables the graphical user interface during installation or uninstallation.

Examples

- Silent installation into the target folder "C:\MOVISUITE":

  ```
  MovisuiteSetup.exe -p"C:\MOVISUITE"
  ```
- Silent installation into the target folder "C:\Program Files (x86)\SEW\MOVISUITE compact" without graphical user interface:

  ```
  MovisuiteSetup.exe -qn
  ```
- Silent uninstallation without graphical user interface:

  ```
  MovisuiteSetup.exe -u -qn
  ```

Return values

See chapter "Return values" (→ 🖺 16)

8.3 Return values

INFORMATION

i Note that there are positive and negative return values.

Value	Meaning
-10	Setup is already running and cannot be started again.
-9	Unknown unhandled setup crash: The setup is started and an unhandled crash occurs, e.g. due to a BlueScreen. The installation must be started again.
-8	Installation aborted by the user.
-7	Incorrect path specified.
-6	Faulty command line parameters.
-5	Minimum requirement .Net framework not met.
-4	Partial installation successful, restart required; installation must be continued manually after restart.
-3	Partial installation successful, restart required; the installation will be continued after restart.
-2	Installation successful, restart required.
-1	Installation failed; a detailed log file is located in the folder "C:\ProgramData\SEW\MovisuiteSetup\Logs".
0	Installation successful.
1	Unknown error.
2	The operating system used is not supported.
3	Insufficient storage available on the target system to install the packages.
4	Insufficient storage available on the target system for required temporary installation files.
5	The user does not have the permission to install the software.
6	A version of the software to be installed is currently running on your target system.
7	The installation cannot be performed because the installation file is corrupt. Download the installation again from the SEW-EURODRIVE website and then start the installation again.
8	Setup aborted by the user.
9	The package cannot be installed because it depends on packages that have not been installed.
10	Error accessing file system.
11	Error accessing registration database.
12	An instance of the installation program is already running. Finish this installation first.
13	The path of the temporary directory is too long.
14	An error occurred while accessing the installation package.
15	Error performing script action.
16	Failed to find the package to be installed.

Value	Meaning
17	Error deleting temporary data from temp directory. Restart the system and perform the installation again.
18	Error loading meta files from the ProgramData directory. The faulty files have been deleted. Perform the installation again.
19	The installation content cannot be found. The MOVISUITE® setup must always be completely unpacked and copied.
20	The installation of MOVISUITE® has not been completed correctly. Perform the installation again.
21	The listed programs prevent the installation from being run.
22	Error preparing listed packages.
23	Error loading the system package meta files from the ProgramData directory. Uninstall MOVISUITE® via the control panel and then install the required MOVISUITE® version again.
24	An MSI installation is already running on the target system. Finish the installation and then install the desired MOVISUITE® version again.
25	The ModuleUpdatePackage cannot be installed because the required MOVISUITE® version is not installed.
26	The data update cannot be installed because the required MOVISUITE® version is not installed.
27	The data update cannot be installed because it is not compatible with the installed MOVISUITE® version.
28	The content of the installation package (*.syspkg) is corrupt. Download the installation files again and then start the installation again.
29	The mentioned file is blocked by another process. Close all programs that might access the file and start the installation again. If necessary, the system must be restarted and the antivirus software must be deactivated temporarily.
30	The data update cannot be installed because the installation of MOVISUITE® is faulty. Install MOVISUITE® again.
31	The data update cannot be installed because the installation of MOVISUITE® requires a restart of the system. Restart the system to install the data update.
32	The data update cannot be installed because the installation of MOVISUITE® requires a restart of the system. Restart the system and wait until the installation of MOVISUITE® is complete to install the data update.
33	The specified file or directory is corrupt. Manually delete the file or the higher-level directory and perform the installation again. If the problem persists, contact your IT system administration.
34	The file system is corrupt. Contact your IT system administration.

9 Firmware Loader

9.1 Notes and introduction

INFORMATION

ℹ️

- Use the Firmware Loader only to correct the error described in this document.
- Do not update the firmware via interruption-prone communication such as VPN or WLAN.
- Only perform a firmware update of the safety option together with SEW-EURODRIVE Service. Additional information in the form of hash codes is required to validate the update.
- For a firmware update of MOVILINK® DDI, MOVITRANS®, and MOVI-DPS®, contact SEW-EURODRIVE Service.

9.1.1 Required files

All files required for the update are part of the following versions of the MOVISUITE® engineering software:

- 2.31.0 with data update V2.31.4 installed
- 2.31.100 with data update V2.31.4 installed
- From 2.40

9.1.2 Bug fixed with the update

Description

If the voltage supply is uninterrupted, one of the following behavior occurs after 49 days:

- Once the error occurs in the device, the application is stopped and error code E17.07 "Fatal error", E13.11 "Data timeout" or E21.1 "Communication error" is displayed on the frequency inverter.
- If the device is connected via a fieldbus, a fieldbus timeout is detected and the device is stopped. Depending on the fieldbus type, an alarm or device failure might be signaled in the higher-level controller.

This only affects the following components:

Component	Faulty	Remedied
MOVIDRIVE® system, MOVIDRIVE® technology	V10.00	V10.11
MOVIDRIVE® modular	V10.00, V10.10	V10.11
MOVITRAC® advanced, MOVITRAC® basic	V10.00	V10.11
MOVI-C® decentralized drive technology • DFC • DSI • DAC • DBC	V10.00	V10.11
MDP92A	V10.00	V10.11

SEW EURODRIVE

Component	Faulty	Remedied
MDE90	V10.00	V10.11
MDR90B, MDR91B	V10.00	V10.11
MOVITRANS® spot TDM80E	V02.00	V02.01
MOVI-DPS® EXK22A, EXK24A	V02.00	V02.01
MOVILINK® DDI encoder AZ4Z, EZ4Z	V02.00	V02.01
MOVILINK® DDI communication unit, part number 18287794 (encoderless design)	V02.00	V02.01
MOVILINK® DDI communication unit, part number 18284698, used for AK8Z, EK8Z, and EI8Z encoders **INFORMATION:** The firmware of AK8Z, EK8Z, und EI8Z encoders cannot be updated. Only the MOVILINK® DDI communication unit with part number 18284698 and firmware version 02.00, to which the encoders are connected, must be updated.	V02.00	V02.01

9.1.3 Behavior in case of incorrect execution

INFORMATION

i Do not switch off the affected device if communication runs via Ethernet or EtherCAT®. Under certain circumstances, communication with the device cannot be established again. The firmware update must then be performed via a point-to-point connection (e.g. USB).

If the firmware update is aborted or not completed for other reasons, start it again.

9.2 Using the Firmware Loader

9.2.1 Establishing a connection to the inverter

1. Click "MOVISUITE®" in the upper left corner.
   ⇨ The main menu opens.
2. Select [New…] > [From network scan] from the menu.
   ⇨ The "Communication…" window opens.
3. Under "Network type", select the connection to your inverter. An Ethernet connection, or a USB connection via the USM21A interface adapter, or the CBG21A keypad is possible.
4. Activate the [Scan USB adapter] slider.
5. Click the [Apply and start scan] button.
   ⇨ The result of the network scan is displayed.
6. Click the [Apply] button.
   ⇨ Acceptance of the scan result is confirmed.
7. Click the [Close] button.

8. Click the [Yes, load device data] button to transfer the device data to MOVISUITE®.

9. To complete the data transfer, click the [Close] button.

⇨ The connection to the inverter has been established.

9.2.2 Exporting current parameters

1. Right-click the device.

   ⇨ The context menu opens.

2. Select the [Export data] menu command.

3. Select the storage location and file name of the data export.

4. Click the [Save] button.

5. To complete the data export, click the [Close] button.

⇨ The current parameters have been exported.

9.2.3 Enabling the "Advanced" permission level

1. Click "MOVISUITE®" in the upper left corner.

   ⇨ The main menu opens.

2. Select the global function "Settings".

3. Select the [Permission level…] menu command.

4. Type "1108" in the "Password" edit box.

   ⇨ "Advanced" is displayed in the "Permission level" display field.

5. Click the [Apply] button.

⇨ The permission level changes to "Advanced".
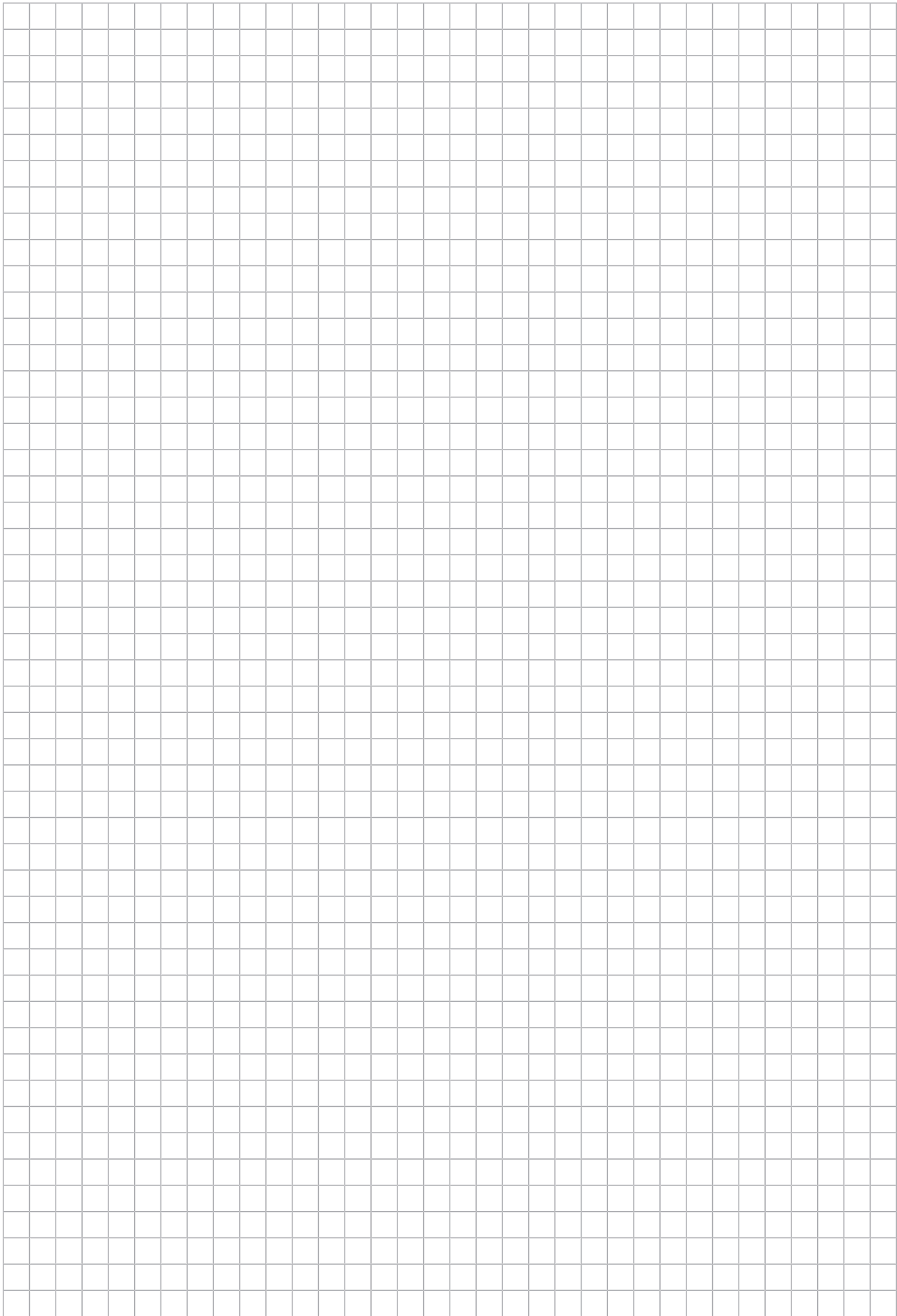
9.2.4 Performing a firmware update

✓ You have inhibited the drive via the digital inputs, the fieldbus or by activating the STO.

1. Right-click the device.

   ⇨ The context menu opens.

2. Select the menu command [Tools] > [Firmware Loader].

   ⇨ The Firmware Loader opens.

3. In the "Target version" choice box of each component, select the corresponding firmware version.

4. Click the [Apply selected firmware] button.

5. To confirm the query and start the update, click the [Yes] button.

   ⇨ The progress of the update is displayed.

6. To complete the update, click the [Close] button.

7. Close the Firmware Loader.

8. Switch the inverter off and on again.

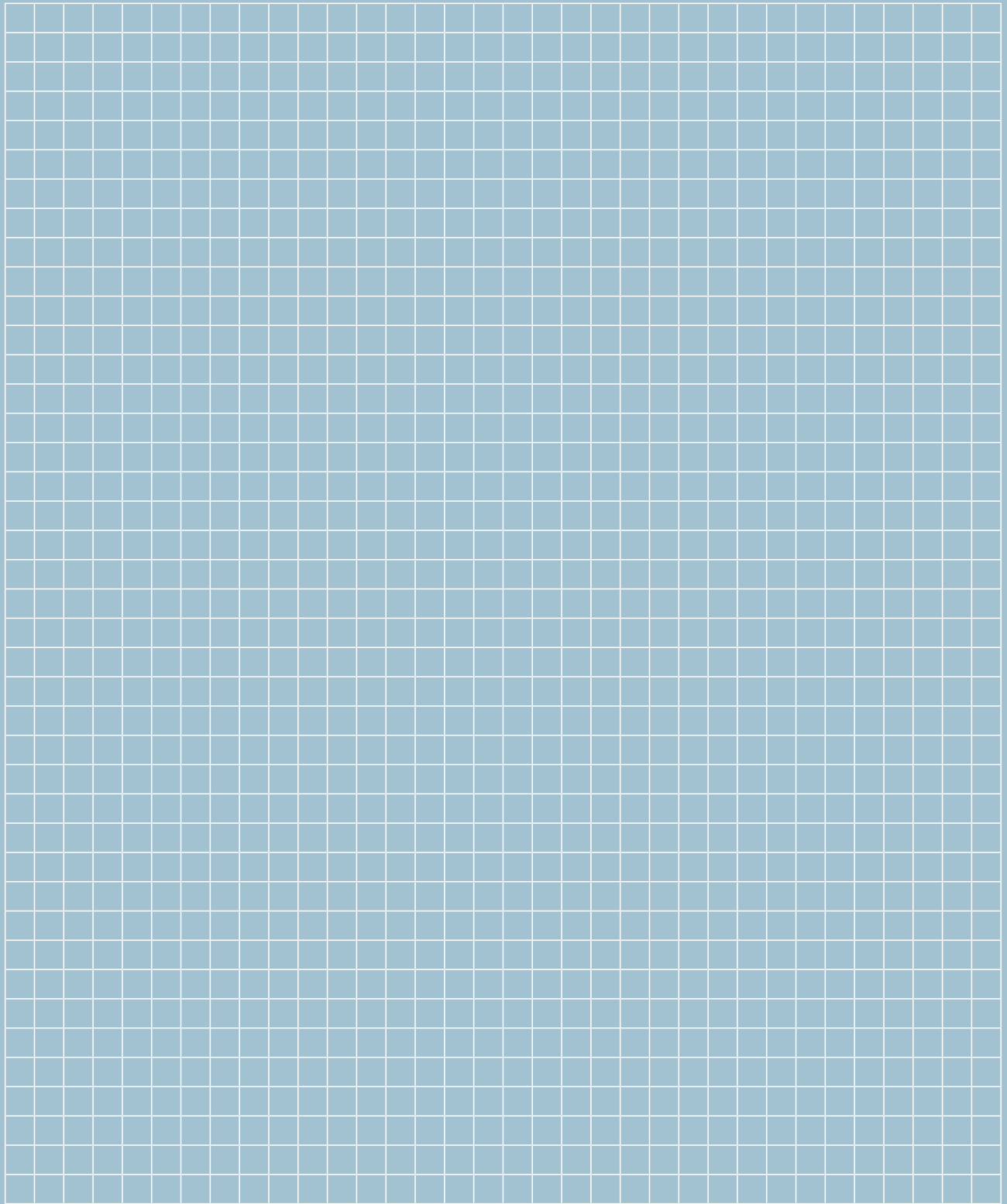⇨ The firmware has been updated.

9.2.5 Update project

1. Right-click the device.

   ⇨ The context menu opens.

2. Select the menu command [Device → PC].

⇨ The inverter transfers the current data to MOVISUITE®.

9.2.6 Setting the permission level to "Default"

1. Click "MOVISUITE®" in the upper left corner.

   ⇨ The main menu opens.

2. Select the global function "Settings".

3. Select the [Permission level…] menu command.

4. Type "1111" in the "Password" edit box.

   ⇨ "Standard" is displayed in the "Permission level" display field.

5. Click the [Apply] button.

⇨ The permission level is changed to "Standard".

**SEW-EURODRIVE
Driving the world**