SEW
EURODRIVE

Manual

DriveRadar®
SMART PRODUCT

DataCollector Scopes

Scan Devices

Scopes

Box Statistics

Analysis

DriveRadar® DataCollector

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

1.3 Other applicable documentation

Observe the corresponding documentation for all further components.

Always use the latest edition of the documentation and the software.

The SEW-EURODRIVE website (www.sew-eurodrive.com) provides a wide selection of documents for download in various languages. If required, you can also order printed and bound copies of the documentation from SEW-EURODRIVE.

1.4 Short designation

The following short designations are used in this documentation.

Designation	Short designation
DriveRadar® DataCollector	Software
Industrial Internet of Things	IIoT

1.5 Structure of the warning notes

1.5.1 Meaning of signal words

The following table shows the grading and meaning of the signal words for safety notes.

Signal word	Meaning	Consequences if disregarded
⚠ **DANGER**	Imminent hazard	Severe or fatal injuries
⚠ **WARNING**	Possible dangerous situation	Severe or fatal injuries
⚠ **CAUTION**	Possible dangerous situation	Minor injuries
NOTICE	Possible damage to property	Damage to the product or its environment
INFORMATION	Useful information or tip: Simplifies handling of the product.	

1.5.2 Structure of section-related safety notes

Section-related safety notes do not apply to a specific action but to several actions pertaining to one subject. The hazard symbols used either indicate a general hazard or a specific hazard.

This is the formal structure of a safety note for a specific section:

SIGNAL WORD

Type and source of hazard.

Possible consequence(s) if disregarded.

• Measure(s) to prevent the hazard.

Meaning of the hazard symbols

The hazard symbols in the safety notes have the following meaning:

Hazard symbol	Meaning
	General hazard

1.5.3 Structure of embedded safety notes

Embedded safety notes are directly integrated into the instructions just before the description of the dangerous action.

This is the formal structure of an embedded safety note:

⚠ **SIGNAL WORD** Type and source of hazard. Possible consequence(s) if disregarded. Measure(s) to prevent the hazard.

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1.6 Decimal separator in numerical values

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

Example: 30.5 kg

1.7 Rights to claim under limited warranty

Read the information in this documentation. This is essential for fault-free operation and fulfillment of any rights to claim under limited warranty. Read the documentation before you start working with the product.

1.8 Product names and trademarks

The brands and product names in this documentation are trademarks or registered trademarks of their respective titleholders.

1.8.1 Trademark of Beckhoff Automation GmbH

EtherCAT® is a registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.

1.9 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

Software specialist

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

- Appropriate training
- Knowledge of this documentation and other applicable documentation
- SEW-EURODRIVE recommends additional training for products that are operated using this software.

2.3 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.

2.4 Designated use

The DriveRadar® DataCollector is used to manually or automatically record and save parameter data of frequency inverters and controllers from SEW-EURODRIVE in periodic intervals.

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.

3 System description

3.1 Introduction

Implementing a smart factory requires recording device data to obtain valuable insights on the state and diagnostics of machines and systems.

With its automatic recording and saving of IIoT sensor data from electronic SEW drive systems of generation B (control cabinet and decentralized drive technology), the DriveRadar® DataCollector enables easy access to the required information.

The software can be set up on field customer IT systems, on edge units or SEW controllers. The devices are connected with the DriveRadar® DataCollector either wireless or with cables via existing network channels (e.g. PROFINET, Ethernet) without hardware retrofitting.

3.2 Functions

Overview of the software features:

- Providing IIoT sensor data from SEW frequency inverters of generation B by automatic or manual recording and saving of scope data
- Providing IIoT sensor data from SEW frequency inverters and controllers of generation B by automatic or manual recording and saving of device parameter data
- Automatic parameterization of the device scopes

The following functions can be implemented according to customer needs:

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Contact SEW-EURODRIVE Service for this.

- Individual could/IIoT connection e.g. based on MQTT or HTTPS as provided service within a customer-specific project.
- Data analysis and evaluation as provided service within the scope of a customer-specific agreement.

3.3 Operating principle

The data extraction is performed by the MOVILINK® parameter service and the scope functionality and is executed as follows:

Scope data

Once the configured interval elapsed, the software checks the state of the device that has been configured for data extraction (e.g. if the scope program is currently active) and loads the defined scope template to this device.

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If, during the device status check after the configured interval has elapsed, the software detects that the scope program in MOVITOOLS® MotionStudio is active, no data extraction will occur and the interval is restarted.

If the trigger that is configured in the scope template is activated and the scope buffer is filled, the data are extracted and saved according to the settings. Afterwards, the software loads the configured scope template to the device again, the scope recording is started and the interval is restarted.

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If a configured device is in "automatic mode" (→ 🗎 31), the scope device status is checked every 10 minutes. If the scope program is deactivated (e.g. due to a system failure or similar), the software loads the configured scope template to the device and restarts the scope recording.

Device parameter data

For devices with scope function, the extraction of the device parameter data is started after the scope recording is completed, meaning that after each scope extraction, an extraction of the configured device parameter data is performed and saved in an additional JSON file. For devices without scope function, the extraction of device parameter data is started immediately after the configured interval and is also saved in an additional JSON file.

3.4 Added value

The software offers the following benefits:

- IIoT connection and optimization of existing systems with SEW drive technology (control cabinet and decentralized drive technology)
- Integration of the functionality without hardware retrofitting and without interfering with the process sequence as it is connected via existing wireless or cable-base network communication channels (e.g. PROFINET, Ethernet). See chapter "Sample topologies" (→ 🗎 33).
- Providing various communication and IIoT uplink options
- Recording of parameter and scope data

4 Project planning information

4.1 Requirements

Correct project planning and proper installation of the devices are required for successful startup and operation.

For detailed project planning information, refer to the documentation of the respective devices.

4.2 Hardware

The following hardware components are compatible with the software:

- MOVILINK®-capable SEW devices of the generation B

  (e.g. MOVIDRIVE®, MOVIMOT®)

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For recording of sensor data, the software uses the Ethernet-based engineering interface of the devices.

- In situations with a lot of access via the MOVILINK® parameter channel (e.g. parallel access of several communication nodes on one device) delays/bottlenecks in communication may occur with some devices. For detailed information on compatibility of the devices, refer the to respective documentation and chapter "IIoT sensor technology properties (extract)" (→ 🖹 32).

- To allow for access via other fieldbus protocols, the respective gateway must be used. For this, observe the notes and information in chapter "Sample topologies" (→ 🖹 33).

4.3 Software

The following software is required for operating the software:

- Microsoft Windows (64 Bit) 7 or higher
- Microsoft .NET Framework as of version 4.7.2

The following software is required to create scope templates:

- MOVITOOLS® MotionStudio

  The MOVITOOLS® MotionStudio software is available for free on the SEW-EURODRIVE website (www.sew-eurodrive.com).

For more detailed information on the hardware requirements of the individual software components, see the documentation for the respective software.

4.4   Licensing

For following licenses are required for operating the software:

Software license	Type designation
DriveRadar DataCollector B unlimited 10axes	SDR0001-000
DriveRadar DataCollector B unlimited 25axes	SDR0002-000
DriveRadar DataCollector B unlimited 50axes	SDR0003-000
DriveRadar DataCollector B unlimited 100axes	SDR0010-000
DriveRadar DataCollector B unlimited 10axes update	SDR0004-000
DriveRadar DataCollector B unlimited 25axes update	SDR0005-000
DriveRadar DataCollector B unlimited 50axes update	SDR0006-000
DriveRadar DataCollector B unlimited 100axes update	SDR0011-000
DriveRadar DataCollector B yearly 10axes	SDR0007-000
DriveRadar DataCollector B yearly 25axes	SDR0008-000
DriveRadar DataCollector B yearly 50axes	SDR0009-000
DriveRadar DataCollector B yearly 100axes	SDR0012-000

After buying the licenses you receive a license key. Enter the license key in the "License check" dialog when you start the software for the first time after "installation" (→ 🖹 13).

INFORMATION

Go to [Help] > [About] to view the current state of the license, meaning the maximum number of supported SEW devices and how long the license is valid.
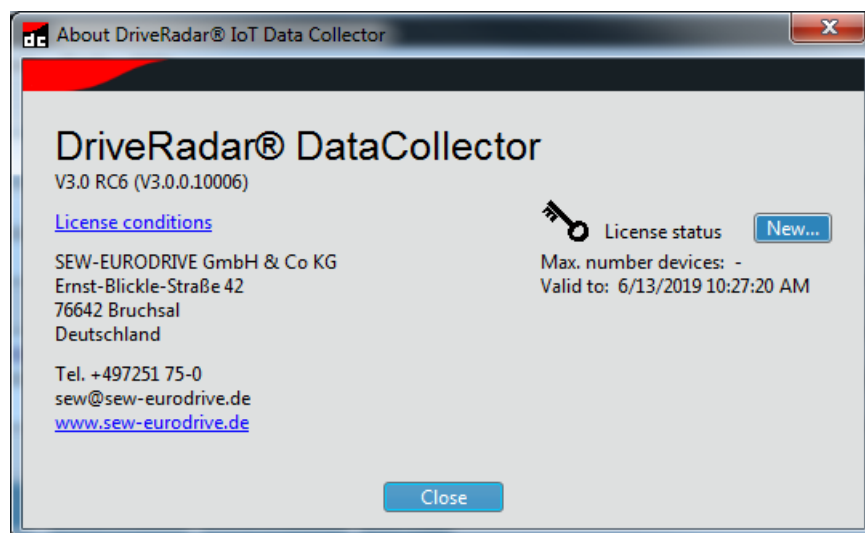

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If you want to switch licenses or renew them, go to the initial screen of the software, open the menu bar. Go to [Help] > [About] and click on the [New] button. Enter the license key in the dialog that opens.

5 Installation

1. Double-click the installation file `setup.exe`. If your PC is not connected to the Internet, double click on `DataCollectorSetup.msi`.

   ⇨ The installation wizard opens.
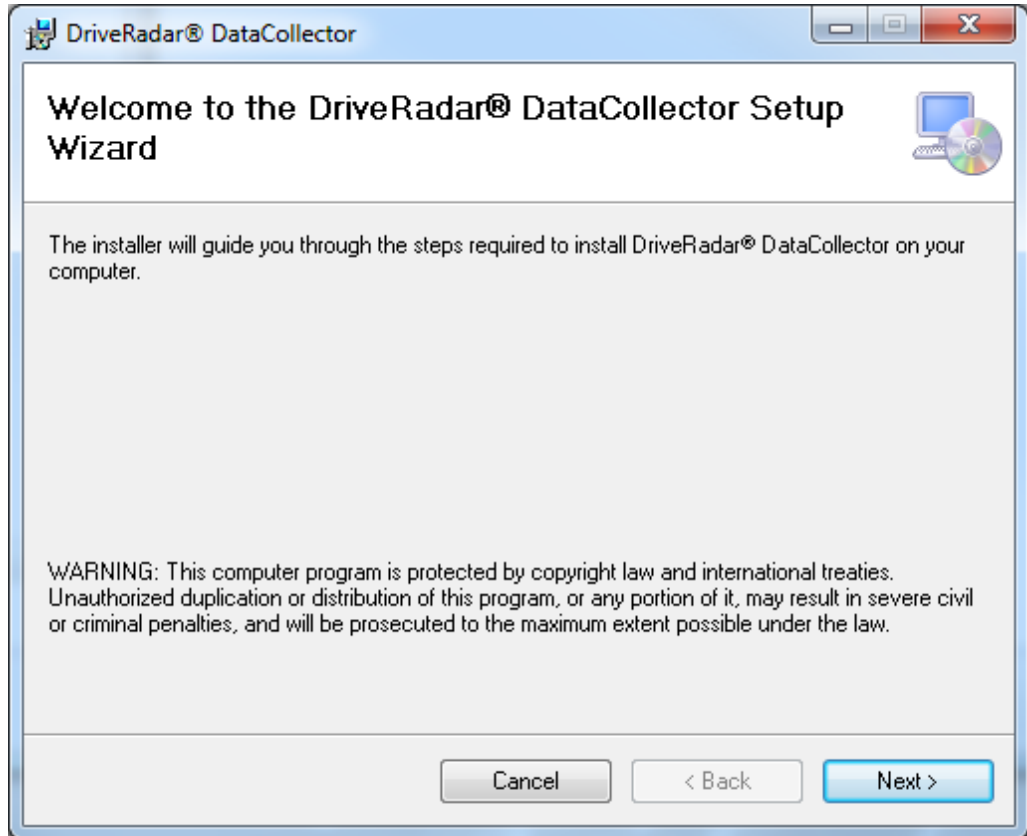
28558074891

2. Follow the installation wizard.

   ⇨ After accepting the license agreement, selecting users and choosing the destination directory, the software is installed on the PC.

INFORMATION

Aside from the program folders, files for configuration are created in the folder `C:\ProgramData\SEW\DataCollector`. To ensure proper functioning of the software, these files must not be deleted or moved. Make sure the signed in user has reading and writing rights for this directory.

3. Start the software.

   ⇨ The "License check" command prompt is displayed.

4. Enter the license key you obtained when buying the "license" (→ 🖺 12) and click [OK] to confirm your entry.

⇨ The software opens and is ready to use.
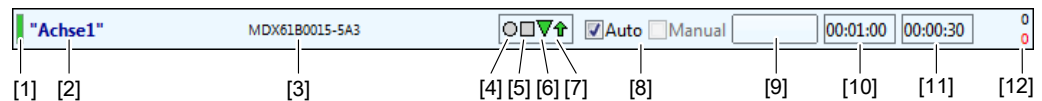
6 User interface

6.1 Start screen

The start screen displays the "Device list" (→ 📄 22) with a list of devices configured for data acquisition. When you first start the software, the list is empty.
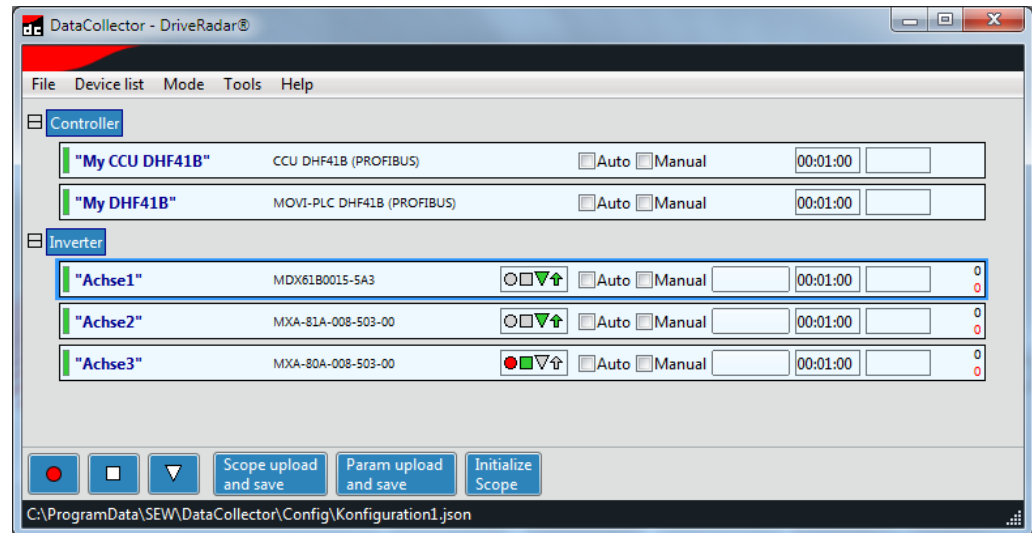
28562121483

6.1.1 Displaying frequency inverters

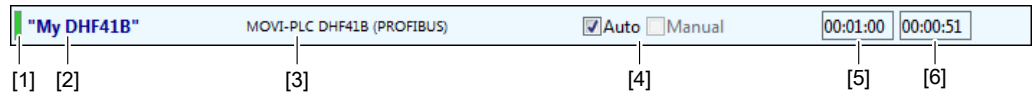Frequency inverters are displayed on the start screen as follows:

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No.	Use
[1]	Status of the network connection (green = device connected)
[2]	Name of device
[3]	Device type
[4]	Status of the scope recording (red = scope recording started)
[5]	Status of the scope memory (green = memory filled)
[6]	Status of triggering (green = triggering in process; green/rot -> auto trigger active)
[7]	Status of data for extraction (green = data ready for extraction)
[8]	Operating mode selection
[9]	Upload progress during data extraction
[10]	Defined time interval for data extraction
[11]	Current timer for data extraction
[12]	Display of successful and failed data extractions (To reset the values, right-click)

6.1.2 Displaying controllers

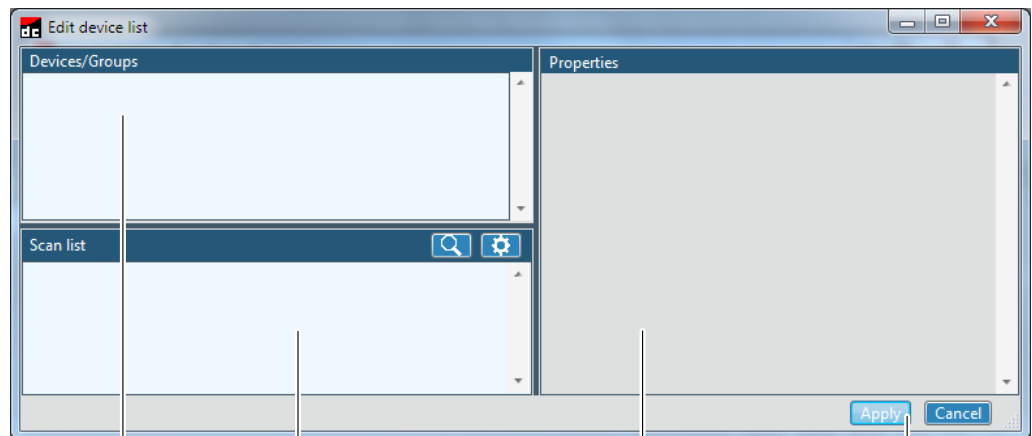Controllers are displayed on the start screen as follows:

| "My DHF41B" | MOVI-PLC DHF41B (PROFIBUS) | ☑Auto ☐Manual | 00:01:00 | 00:00:51 |

[1] [2]   [3]   [4]   [5]   [6]

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No.	Use
[1]	Status of the network connection (green = device connected)
[2]	Name of device
[3]	Device type
[4]	Operating mode selection
[5]	Defined time interval for data extraction
[6]	Current timer for data extraction

6.2 Configuration editor

The "device list" (→ 🗎 22) shows device-specific properties of the devices for which data is collected. In the corresponding editor, the devices are created and the properties are set.

In the menu bar on the start screen, click "Edit" in the "Device list" menu to open the editor to edit the "device list" (→ 🗎 22).

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No.	Use
[1]	Devices and device groups created for data acquisition
[2]	Devices detected during the scan of the network. Scope-capable devices have a blue mark on the left of the device designation. For more information, refer to the "Scan" section in chapter "Options" (→ 🗎 16).
[3]	Properties of the selected device
[4]	Button for applying the edited configuration

7 Settings

In the menu bar under "Settings", you will find the software settings that are described in this chapter.

7.1 Language

Language of user interface (software restart required).

7.2 Options

Dialog with the following options for software operation:

General

- Set whether or not the last saved device list file is opened when the software is started.
- Set in which directory the lists with identifications for SEW and customer applications are saved. The entries in the lists are available in the drop-down lists "Appl. customer" and "Appl. SEW" during device configuration. See chapter "Device configuration" (→ 🖹 22).

    Use the respective buttons below to open the lists with "SEW identification" or "Customer identification" for editing.

Scan

Select the network adapter used to perform a network scan. In addition, the IP address can be explicitly specified for the scan.

Scope

Set the option for scope recording:

Automatic Mode
- *Wait for valid data*

    Time waiting for the trigger if, after the set interval, no valid scope data is available.

- *Parameterize inverter before start*
  Before every start of a scope recording, a parameterization of the inverter scope function is performed. For this purpose, the parameters from the scope template file that were assigned to the device are transferred to the device. This overwrites the existing configuration of the scope.

- *Restart recording after data acquisition*
  Restart the scope recording after every data acquisition and wait for the next trigger. If the scope recording is started by another component (e.g. an higher-level controller), this option should be deactivated.

- *Data acquisition only with completely filled buffer*

    Delete incomplete scope recordings that may occur for system reasons.

Program Start

- *Start scope function of devices*
  Start scope function (scope recording) for all configured devices, when starting the software. No scope templates are transferred.

- *Start automatic mode of devices*
  Start the automatic mode for all configured devices, when starting the software.

Data memory

Select data to be recorded (Scope and/or parameter data) and set the storage location as well as options for limiting the required memory space for locally saving the recorded data.

MultiTemplate

Assigning multiple scope templates to one "configured device" (→ 📄 22). This way, different scope templates can be used for successive scope recordings, e.g. for changing the recording channel or the sample rate. By clicking the [Test] button in this register, the devices are listed that have several scope templates assigned.

To assign several scope templates to one device, a text file (*.txt) with a list of the successive scope templates must be created for the device under `C:\ProgramData \SEW\DataCollector\ScopeTemplates`. The text files are assigned to the respective device using the file name:

IP target address of the device + R + *Routing info of the device* . txt z. B. `192.168.10.12R2.1.1.1.txt`

The text file must contain the entire path to the used scope templates, one line per path in the desired order, e.g.

`C:\ProgramData\SEW\DataCollector\ScopeTemplates\vorlage1.SCT`

`C:\ProgramData\SEW\DataCollector\ScopeTemplates\vorlage2.SCT`

The scope template is loaded after data acquisition and before the next scope recording starts. When the scope template of the last line in the text file has been used, the scope template of the first line is used again.

7.3 Meta data

Specifying information regarding the PC on which DriveRadar® DataCollector is executed. This data is saved in every generated JSON file.

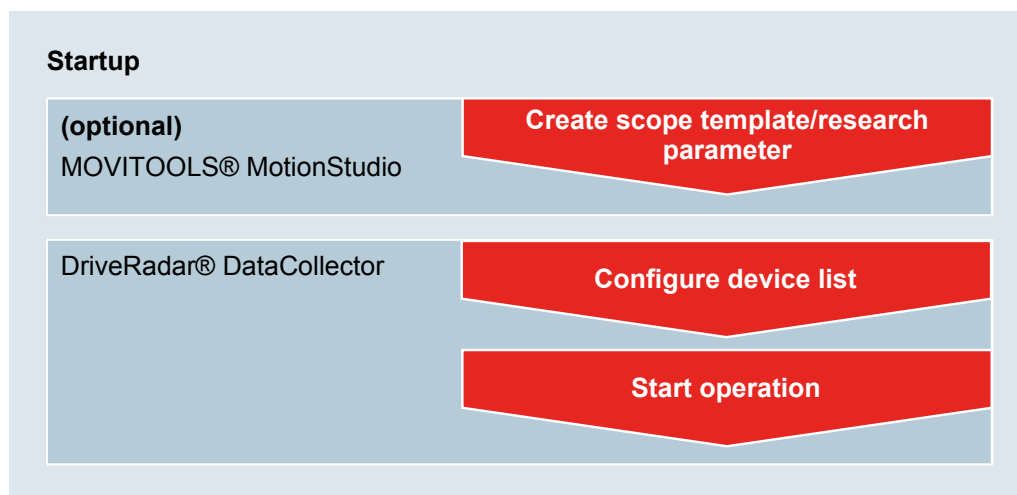The meta data comprise the following information:

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8 Startup

8.1 Startup procedure

The schematic diagram below shows the startup procedure:



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8.2 Scope templates

MOVITOOLS® MotionStudio is used to create scope templates to link frequency inverters to the DriveRadar® DataCollector. The MOVITOOLS® MotionStudio software is available for free on the SEW-EURODRIVE website (www.sew-eurodrive.com).

This chapter briefly describes all necessary steps in MOVITOOLS® MotionStudio for data acquisition of scope recordings with the DriveRadar® DataCollector.

For more information on using MOVITOOLS® MotionStudio, refer to the respective documentation. The manual on how to use scope functions can be opened via the [Help] menu. Further, the manual on scope functions is stored in the installation directory of MOVITOOLS® MotionStudio via the following path: `...\Program Files\SEW \MotionStudio\Help\SEWScope_Manual.pdf`

8.2.1 Configuring scope

✓ MOVITOOLS® MotionStudio is opened and a project is created.

1. Configure the communication ports in your project and scan the network.

    ⇨ The devices detected in the network are added to your project.

2. Open the context menu of the inverter and, in the "Diagnostics" submenu, click on "Scope (Offline)".

    ⇨ The "Scope" window appears.

3. In the menu bar of the window, click "Set recording..." under "editing".

    ⇨ The "Scope settings" window appears.
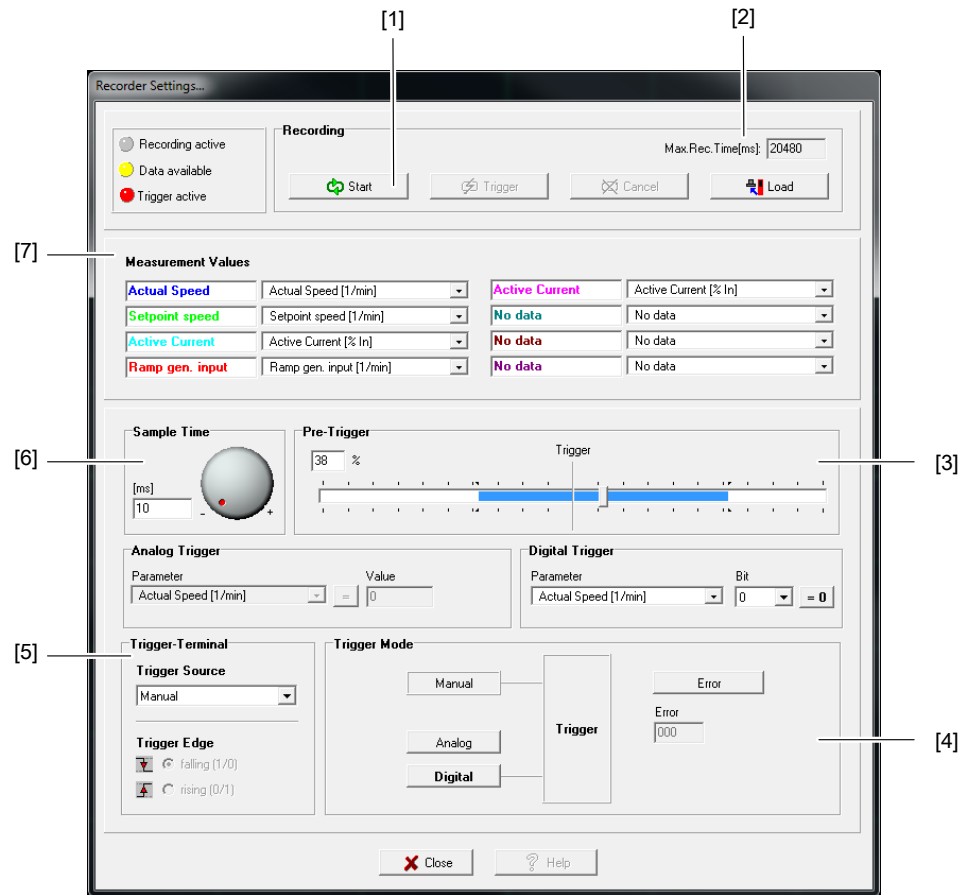
28582211851

No.	Designation	Use
[1]	Start recording	Apply configuration and start scope recording
[2]	Sampling cycle in ms	Time interval in which the measured values are written into the scope memory.
[3]	Pre-trigger	Pre- and post-trigger time
[4]	Trigger mode	Select between manual, analog and digital
[5]	Trigger terminal	Select a digital input or output of the device
[6]	Maximum runtime	Time resulting from the size of the scope memory on a device and the set sampling cycle
[7]	Measured value channel assignment	Set parameters to be recorded

4. Configure the scope recording using the available setting fields.

5. Test the configuration by manually starting a recording using the buttons in the "Recording" area ([Start] scope recording, if required [Trigger] manually and [Load] scope template on the device).

6. In the scope settings window, click the [Close] button.

8.2.2 Save scope as template

Save the configured scope device settings as template file to link it during the configuration of a device in the DriveRadar® DataCollector.

✓ The "Scope" window of an inverter is opened in MOVITOOLS® MotionStudio. See chapter "Configuring scope" (→ 🖺 19).

✓ The scope template has been loaded to the device.

1. In the "File" menu bar, click "Save as template...".

2. Select a storage location and a file name for the template and click [Save].

   ⇨ The scope settings are saved as a scope template (*.sct) at the defined storage location.

8.3 Device list

Configuration of devices is realized via the "Device list" menu on the "Start screen" (→ 🗎 14) of the DriveRadar® DataCollector.

1. For configuring new devices and device groups, click [Edit] in the "device list" menu on the start screen.

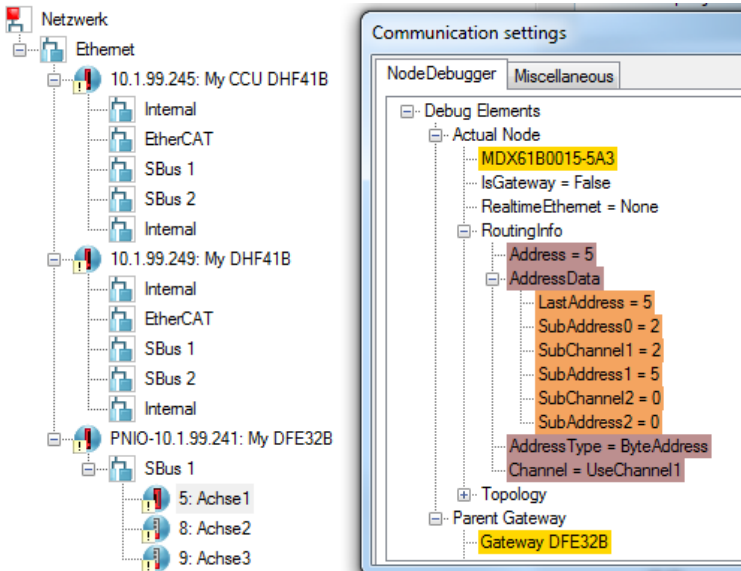   ⇨ The "configuration editor" (→ 🗎 15) opens.

8.3.1 Device configuration

1. In the "Scan list", click the 🔍 button.

   ⇨ All devices detected in the network are displayed in the "Scan list". Go to "Options" (→ 🗎 16) for the scan settings.

2. Move the devices you want to use for data acquisition from the "Scan list" to the "Devices/groups" area using drag & drop.

3. In the "Devices/groups" area, select the device that you want to configure for data acquisition.

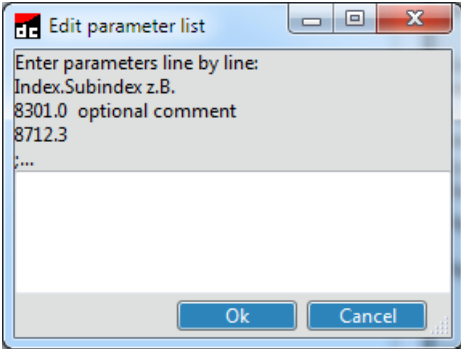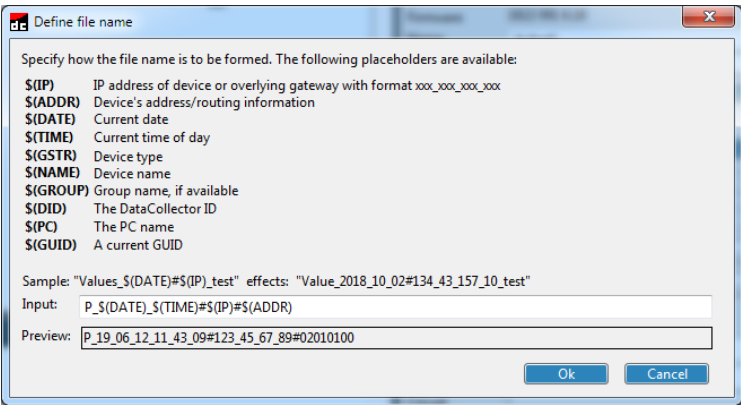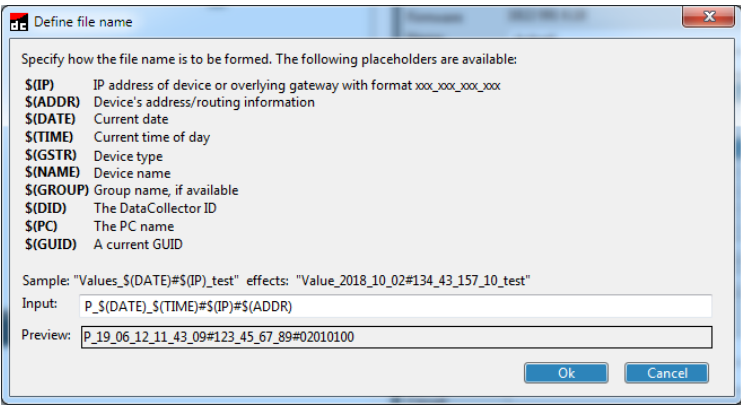   ⇨ The properties of the selected device are displayed in the window on the right.
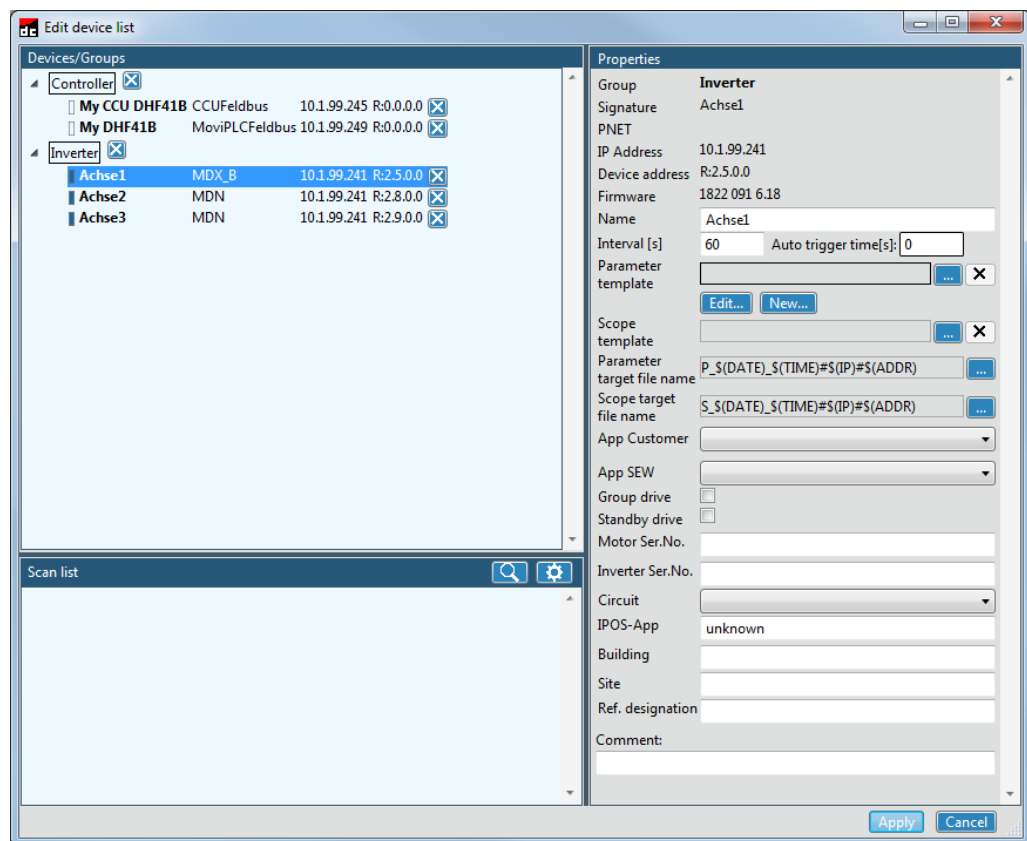
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4. Configure the data acquisition with the device settings.

The following properties and settings are available for the devices:

Characteristic	Description
Group	Group assignment of the device. See "Grouping devices" (→ 📄 27)
Signature	Signature of the device
PNET	PROFINET address of the device in the network
IP address	IP address of the device in the network
Device address	Device address in the network IP addresses as well as subaddresses and subchannels are used to uniquely identify the device in the network. For a better overview, you can display the communication settings in MOVITOOLS® MotionStudio using the keyboard shortcut "Ctrl + Shift + K" for each device in the network. *29186320907*
Firmware	Firmware version of device
Designation	Designation of device
Interval [s]	Interval for automatic data acquisition in seconds
Auto-trigger time [s]	Auto-trigger time until start of data acquisition in seconds. Trigger time for systems where triggering directly via scope is not possible (e.g. with S1 duty cycle). The trigger time is relative and result from: `Interval [s] - Auto-trigger time [s]`

Characteristic	Description
Parameter template	Select a file listing the device parameters that will be recorded once the interval has elapsed.
	Select a parameter template by clicking the [...] button. Parameter templates are stored in the directory `C:\ProgramData\SEW\DataCollector\ParameterTemplates`.
	By clicking the [Edit...] button, a window is opened in which the selected parameter template can be edited.
	Click the [New...] button to create a new parameter template.
	28565412619
Scope templates	Select a file containing the settings for the scope recording. For more information on creating the file, refer to chapter "Scope templates" (→ 🖹 19).
	If you want to assign multiple scope templates to one device, observe the notes on the "MultiTemplate" register in chapter "Options" (→ 🖹 16).
	If the check box "Parameterize inverter before start" is activated in the "Scope" register of the "Options" (→ 🖹 16), the content of the scope template is transferred to the inverter before each start.

| Characteristic	Description
Parameter destination file name	Name of the file in which the parameters are saved. You can set the storage location of the "Data memory" register in the "Options" (→ 🖹 16). You can freely select the file name. Refer to the figure below on information on which placeholders can be used to create the file name. Tip: Use placeholders to create a file name that will allow you to assign the file to the device again later. To ensure that the names are unique for all devices, use the placeholder `$(GUID)`. *29186558603*
Scope destination file name	Name of the file in which the scope data are saved. You can set the storage location of the "Data memory" register in the "Options" (→ 🖹 16). You can freely select the file name. Refer to the figure below on information on which placeholders can be used to create the file name. Tip: Use placeholders to create a file name that will allow you to assign the file to the device again later. To ensure that the names are unique for all devices, use the placeholder `$(GUID)`. *29186558603*
Appl. Customer	Customer application to which the device is assigned (e.g. for structuring the recorded data for evaluation). The list of applications can be maintained in the "General Information" tab under "Options" (→ 🖹 16).

Characteristic	Description
Appl. SEW	SEW application to which the device is assigned (e.g. for structuring the recorded data for evaluation). The list of applications can be maintained in the "General Information" tab under "Options" (→ 🖹 16).
Group drive	Define the device as group drive.
Standby drive	Define the device as standby drive.
Motor part no.	Serial number of the motor
Inverter part no.	Serial number of the inverter
Connection type	Connection type of the drive
IPOS® app	Designation of the IPOS® application (is filled out automatically)
Building	Hall in which the device is located
Location	Location in which the device is located
Ref ID/OR ID	Reference ID / Operating resource ID of the device
Comment	Other comments

8.3.2 Grouping devices

For a better overview, the configured devices can be grouped in the software. This way, you can define certain settings for one group and thus for all devices within this group.

Perform the following steps to group devices:

1. In the "Configuration editor" (→ 📄 15), right-click on the context menu of the "Devices/Groups" area and select the "Create new group.." menu item.
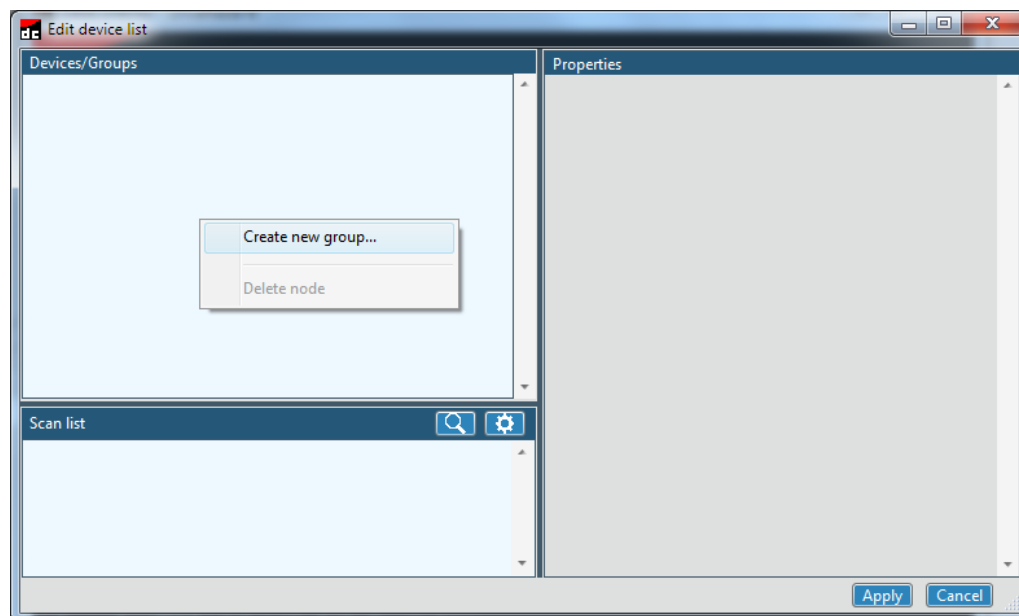
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⇨ A window opens where you can specify the group name.

2. Enter the group name and click on [OK].

⇨ The group is added to the "Devices/Groups" area.

3. Add devices from the "scan list" or from the "Devices/Groups" area to the group using drag & drop.

4. Mark the created group in the "Devices/Groups" area.

⇨ The properties of the group are displayed.
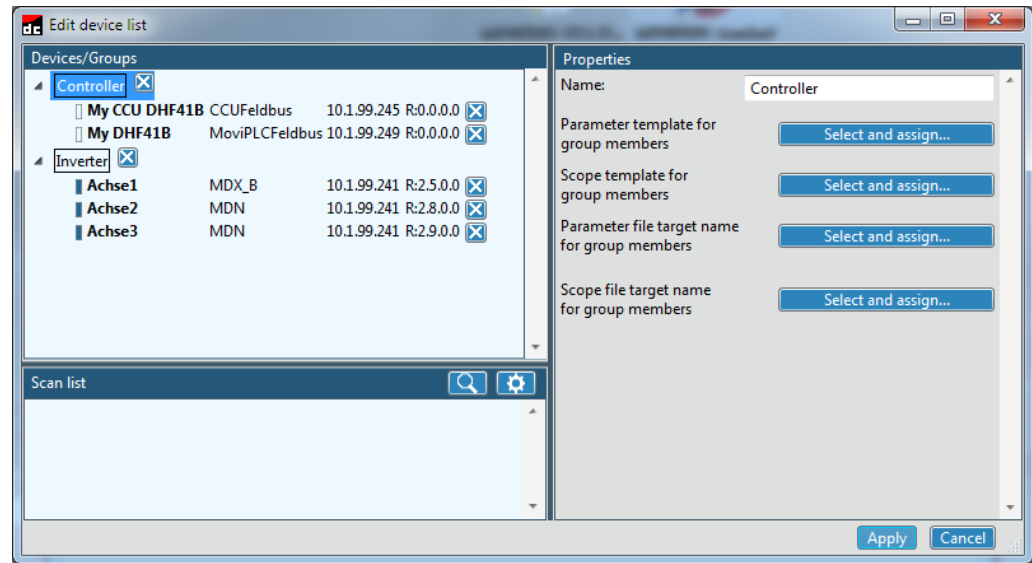
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5. Configure the group using the available setting fields. The following properties and settings are available for the groups:

- *Name of the device group*

- *Parameter templates for group members*

  Select a file in which the device parameters are described that will be recorded once the interval has elapsed. The template file is assigned to all devices that are members of the group. A template file already assigned to the device is overwritten.

- *Scope template for group members*

  Select a file containing the settings for the scope recording. The template file is assigned to all devices that are members of the group. A template file already assigned to the device is overwritten.

- *Parameter destination file name for group members*

  Define the parameter destination file name. The destination file name is assigned to all devices that are members of the group. Any name already assigned to the device is overwritten in the process.

- *Scope destination file name for group members*

  Define the scope destination file name. The destination file name is assigned to all devices that are members of the group. Any name already assigned to the device is overwritten in the process.

8.3.3 Saving the configuration

1. To save the configuration click "Save" or "Save as..." in the "Device list" menu of the menu bar on the start screen.

   ⇨ With "Save", the configuration file (*.json) is saved in the directory `C:\ProgramData\SEW\DataCollector\Config`; with "Save as..." it is saved at the specified storage location.

INFORMATION

Under "options" (→ 🖹 16), you can set that the configuration that was saved last is used when the software is started.

9 Operation

9.1 Operating modes

The software has "manual mode" and "automatic mode".

Manual mode is used to support startup, e.g. testing the function, configuration, or scope resolution. In this operating mode, the scope function can be initially parameterized manually with the configured scope template.

Automatic mode is used exclusively to automatically execute the configured acquisition of IIoT sensor data.

9.2 Activating manual mode

Proceed as follows to use manual mode:

1. On the start screen, activate the "Manual" check box for all devices that you want to control manually. If you want to activate manual mode for all devices on the start screen, click "Activate manual mode for available devices" under "Mode" in the menu bar.

    ⇨ The selected devices can be controlled manually using the buttons on the start screen. As controllers do not have any scope function, only the button [Param upload and save] is available for these devices.

    ⇨ The settings for saving parameter and scope data, the file names and the storage locations are inherited from the "Device list" (→ 🖺 22).

2. Control operation using the following buttons on the start screen:
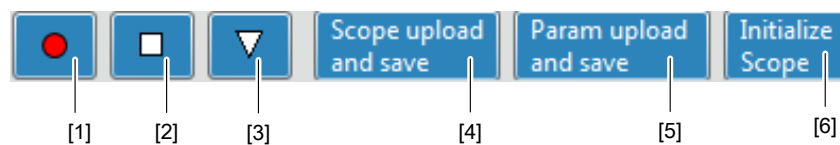
28587363851

No.	Use
[1]	Start scope recording
[2]	Stop scope recording
[3]	Set trigger
[4]	Upload and save scope data
[5]	Upload and save parameter data
[6]	Initial download of scope template to the frequency inverter

9.3 Initialize devices

In manual mode, all scope-capable devices of the network can be initialized, meaning the configured scope template can be loaded to the respective devices.

Proceed as follows:

1. Activate "manual mode" (→ 🖹 30) for all devices you want to initialize.

2. On the start screen click the [Initialize scope] button.

9.4 Starting automatic mode

Proceed as follows:

1. On the start screen, deactivate the "Manual" check box for all devices that you want to operate in automatic mode.

2. Click "Start automatic mode for available devices" in the menu bar under "Mode".

⇨ Automatic data acquisition of the devices is started.

⇨ If the set trigger occurred, an upload of the scope memory and/or the selected parameters is realized after the set time has elapsed.

⇨ Depending on the settings, the collected data are saved as .JSON files at the set location.

10 Appendix

10.1 IIoT sensor technology properties (extract)

	Number of scope channels	Storage depth (in bit)	Number of measuring points	Memory size (in kB)	Maximum sample rate	Single parameter extraction
MOVIAXIS® MXA	8	32	2048	64k	500µs (250µs)	✓
MOVIAXIS® MXR	8	32	2048	64k	62,5µs	✓
MOVIDRIVE® B	8	16	2048	32k	1 ms	✓
MOVITRAC® B	4 (8)	16	2048	32k	1 ms	✓
MOVIGEAR®	8	16	2048	32k	1 ms	✓
MOVIFIT®	8	16	2048	32k	1 ms	✓
MOVIDRIVE® MDR	8	16	2048	32k	1 ms	✓
MOVIMOT®	-	-	-	-	-	✓
DHx21B	-	-	-	-	-	✓
DHx41B	-	-	-	-	-	✓
UHX71B	-	-	-	-	-	✓

10.2 Sample topologies

> **INFORMATION**
>
> Do not execute MOVITOOLS® MotionStudio and DriveRadar® DataCollector for one device at the same time as that may impair the functionalities.

10.2.1 Data acquisition via PROFINET

> **INFORMATION**
>
> Make sure that sufficient bandwidth for parameter channel communication is available for the DriveRadar® DataCollector via PROFINET.

- SEW drives are subordinate to a PROFINET controller. Other Ethernet-based protocols (EtherNet/IP™, Modbus TCP, ...) are also possible.
- The DriveRadar® DataCollector is locally installed on your PC.

29323502475
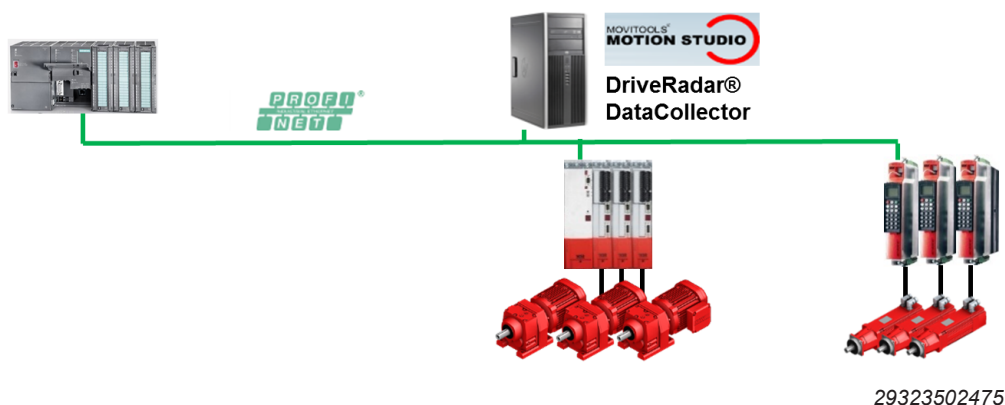
10.2.2 Data acquisition via Wi-Fi

- SEW drives are subordinate to a PROFIBUS controller.
- The DriveRadar® DataCollector is locally installed on your PC.
- The PC and the SEW drives simultaneously communicate via Wi-Fi. A DFE32B option card is used as the gateway between Ethernet and the SEW system bus.

29323602827
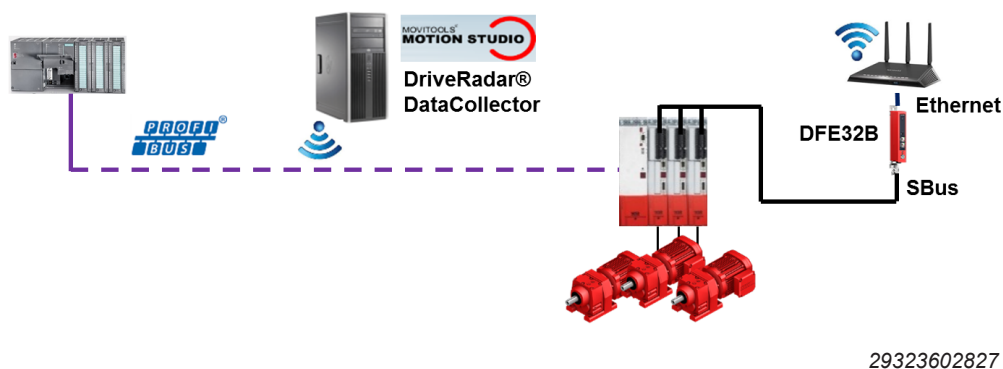
10.2.3 Data acquisition via SEW system bus and gateway

- The SEW drives are controlled and monitored locally via I/Os.
- The DriveRadar® DataCollector is locally installed on your PC.
- The PC and SEW drives are connected via an Ethernet network. A DFE32B is used as the gateway between Ethernet and the SEW system bus.

29323597067
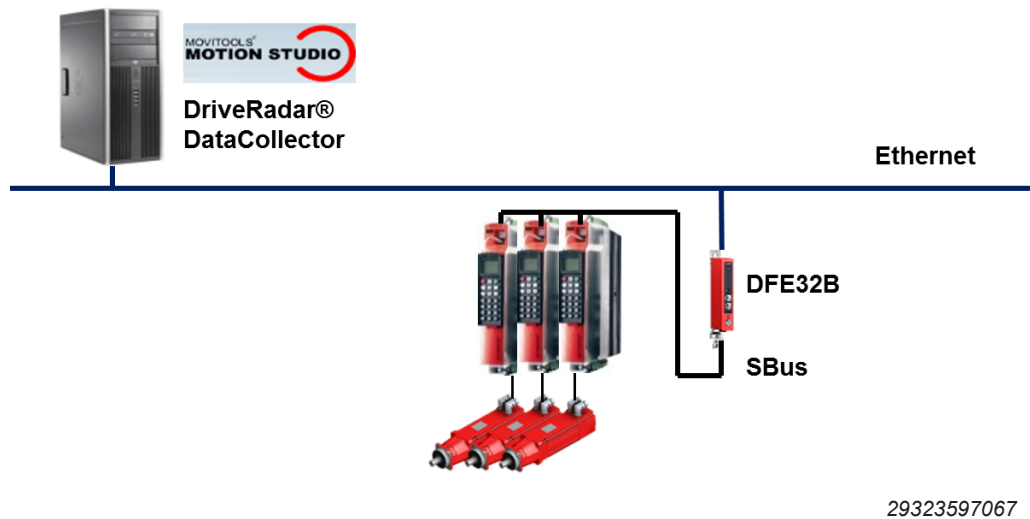
10.2.4 Data acquisition of single parameters

For devices without scope functionality such as MOVI-PLC® DHE41B or MOVIMOT® data acquisition of single parameters is possible.

- SEW drives are controlled locally or via controller.
- The DriveRadar® DataCollector is locally installed on your PC.
- The PC and SEW drives are connected via an Ethernet network. The compact control MOVI-PLC® DHE41B is used between the Ethernet network and the serial bus.

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